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EPIPLOPLEXY IN CIRRHOSIS OF THE LIVER WITH ASCITES.*

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Talma, of Utrecht, was the first to suggest establishing a collateral circulation, by means of adhesions between the abdominal viscera and the parietes, for the relief of ascites in cases of cirrhotic liver. The first three operations cited below were performed in Holland as a result of this suggestion.

At the time that these operations were being done in Holland, Drummond and Morison designed the same operation independently, and Morison did two operations and must be credited with being the first to present a successful case to the profession.

Case I. Van der Meule, in 1889, operated upon a man with cirrhotic liver, probably stitching the omentum in the wound. He died immediately of shock.

Case II. In 1891 Schelkly had a case similar to this and did the same operation. He became delirious during the night, tore the dressing off and infected the wound, and died of peritonitis on the fourteenth day.

Case III. The next case is that of Thomas Lens, operated upon in 1892. The patient was a male, 61 years of age, who had atrophic cirrhosis of the liver. The omentum was stitched in the wound and he made a good recovery, but there was no relief from the ascites; this was supposed to be due to the condition of the liver. He lived

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for six months after the operation. At the post mortem the omentum was found adherent to the abdominal wall and contained moderately enlarged blood vessels.

Case IV. Drummond and Morison. September, 1894. The patient, a female 42 years of age, first noticed her feet and legs swelling in the early spring of 1893. In May she was tapped for the first time. Between May and August she was tapped 48 times, with an average of 12 pints of fluid each time. Beyond a great distension of the abdomen, nothing was found. Her health had been good until about a year before the abdomen began to swell. There was no history of alcoholism. The abdomen was opened below the umbilicus and dried out with sponges. The liver, spleen and parietal peritoneum were sponged. The omentum was sutured to the anterior abdominal wall. A glass tube was passed down into Douglas' pouch for drainage. Adhesive strips were applied to the abdomen down to the tube. The tube was left in place for 14 days; after it had been removed, the wound soon closed and in a short time the abdomen became distended again, and she was tapped 69 times during the remaining 19 months of her life. A post mortem was not made.

Case V. Drummond and Morison. October, 1895. A woman, 39 years of age, became ill early in 1895, vomiting blood and became jaundiced. The jaundice continued for several months, the distension became so great that it was necessary to tap her about the middle of July, and about every three weeks thereafter until operated upon, the fluid increasing every time. Previous to this she had always enjoyed good health. She drank quantities of spirits and wine. When admitted for operation, she was very much emaciated and could only rest in a sitting posture. The same operation was done as in the above case. The first ten days the tube was frequently pumped out. Three weeks after the operation no fluid was escaping, and the tube was removed. The patient went home perfectly well. Eight months after the operation, she developed a slight ventral hernia. This increased in size, and was operated upon two years later. The peritoneum was not opened. After the operation she complained of numbness of the extremities, became jaundiced and died the next day. Post mortem the liver, spleen, intestines and omentum were found attached to the parietes by numerous band-like adhesions, many of which contained very little except blood vessels. Some of these were four inches long and as large as the radial artery. The liver was much atrophied and degenerated. Microscopically, it showed fatty degeneration. Normal cells were few and were found in the centre of the lobes.

Case VI. This very interesting case was operated upon by Talma in March, 1896. The patient was a boy nine years of age, whose

spleen and liver became enlarged without any known cause; he also had parenchymatous nephritis. This responded to treatment. There was no abatement of the ascites and an exploratory laparotomy was done with the expectation of finding tubercular peritonitis; the peritoneum was normal, and the abdomen was closed. The kidneys continued to improve and, after several tapplings, the abdomen was again opened and the omentum and the gall bladder were sutured to the abdominal wall. A perfect result was obtained, there was no recurrence of the ascites. The spleen did not decrease in size, and was sutured into a pocket of the peritoneum, this being the third operation. Two years after operation, he was perfectly well. The spleen had grown much smaller, and the liver was performing its functions.

Case VII. R. Morison, in January, 1897, operated upon a man 42 years of age, who had been a moderate drinker, for cirrhosis of the liver. Two incisions were made, the lower one being used for drainage. A typical hobnail liver was found, which was somewhat contracted. The spleen was six times its normal size. The abdomen was sponged dry. The liver, spleen, coils of intestines and parietal peritoneum were rubbed with a sponge and the omentum was sutured to the abdominal wall. For three weeks he was alternately excited and depressed. He made a good recovery, and two years later the medical examiner of a well known insurance company passed him as a first class risk.

Case VIII. This case is the fourth operated upon by Morison, and was done two months after the one above. The patient was a very stout woman, 54 years of age, whose legs and abdomen had been swollen for 18 months. Two weeks prior to the operation, the abdomen was tapped and five and a half gallons of fluid were withdrawn. The abdomen was still very much distended and a round elastic tumor could be outlined, which proved to be an ovarian cyst requiring an extensive dissection for its removal. The liver was found to be cirrhotic with enlargement of the spleen and omental vessels. The abdomen was closed without drainage and the patient did well for a week, when she developed diarrhoea, went down rapidly, and died on the eleventh day, cirrhotic kidneys being the cause.

Case IX. Narath and Talma. October, 1898. The patient was a male, 59 years of age. The liver was hard and nodular, with a thickened capsule. The spleen was very much enlarged. Before the operation the patient had been very much depressed at times; this returned after the operation, with delirium. He eventually recovered from this. The operation consisted in sponging the omentum and parietal peritoneum and suturing them together. There was no return of the ascites.

Case X. R. F. Weir. November, 1899. A man 39 years of age, a wine-taster by trade, first noticed his belly becoming distended two years before. He became jaundiced in March, 1898, and remained so three weeks. He was tapped in August and every week thereafter. He lost 25 pounds in weight. His urine showed a few granular casts, but no albumen. Heart normal, liver and spleen much enlarged. Incision made over the right rectus muscle in its upper third. The abdomen was dried out with sponges. The surface of the liver and adjoining peritoneum were scratched with a hat pin, and the omentum was sutured to the abdominal wall; a small opening was made above the pubis for drainage. Adhesive strips were applied down to the drainage tube. The patient died on the fifth day. A large echinococcus cyst was found in the right lobe of the liver, pushing up the diaphragm. Death was due either to this cyst or infection from the tube.

Case XI. A. E. Neumann. November, 1898. A female, 45 years of age, with a hard, firm and smooth liver and enlarged spleen, was operated upon for the relief of the ascites. The parietal peritoneum was curetted and the omentum sutured to it. She made an uneventful recovery, but had a trace of the ascites left. Six months later this had disappeared, and she was apparently perfectly well. The veins of the abdomen around the umbilicus became quite prominent.

Case XII. Emil Ries. 1899. The patient was a woman, who had been well until the winter previous to this, when she began to suffer with pains in the region of the stomach. She lost about 70 pounds in weight during the winter. Was having hemorrhages from the bowels almost daily. There was a mass in the region of the liver. There was no edema or ascites; no history of syphilis or alcohol. At the operation, the liver was found to be deeply furrowed and cirrhotic, and showed some adhesions to the parietal peritoneum, with some enlarged vessels. The omentum was sutured to the abdominal wall. The patient was allowed to sit up in 24 hours, and walked around in three days and went home on the seventh day. Has not had a single hemorrhage since the operation.

Case XIII. Narath and Talma. March, 1899. The patient was a woman, 67 years of age, who had had a chronic peritonitis, producing cirrhosis of the liver. The ascitic fluid was chyle like in character. The area of liver dullness was decreased. At the operation, the liver was found to be very small, hard and nodular, and markedly fibrous. The omentum was sutured to the abdominal wall. The wound was closed without drainage. The patient recovered, but there was no improvement in the ascites.

Case XIV. Folmer and Talma. May, 1899. This patient was a male, who had also had a chronic peritonitis, which produced the

cirrhosis of the liver. At the time of the operation numerous adhesions were found between the liver, spleen, omentum and abdominal wall. The parietal peritoneum was scraped and the omentum sutured to it. The liver was enlarged, hard and nodular. The patient recovered, but there was no relief from the ascites.

Case XV. Rolleston and Turner. July, 1899. A man, 45 years of age, was admitted to St. George's Hospital, June 22nd, having vomited three quarts of blood during the previous 48 hours. He was a constant drinker of beer, and had syphilis 27 years before. The spleen was enlarged, but the liver was not. For several weeks prior to operation he had a slightly elevated temperature. There was great abdominal distension, with edema of feet and legs. Sixteen pints of fluid were withdrawn, by tapping, on the day of the operation. An incision was made parallel with and a short distance below the costal margin. Liver hobnailed. The surface of the liver was sponged and suture passed through its edge, the omentum and cut edge of wound, and then tied. No drainage. There was a steady improvement in his condition. He was somewhat depressed for a time, and for a short while complained of a dragging sensation. When seen four and a half months later, there was a trace of ascites and edema of the feet.

Case XVI. Rolleston and Turner. July, 1899. A Frenchman, 52 years of age, was admitted to St. George's Hospital, June 21st, having noticed the ascites two months, and the edema of the feet only two weeks before. He had suffered with morning vomiting for four months, and pain over the liver for two months. He drank large quantities of wine. Four days after admission, 18 pints of fluid were drawn off. The liver was found to be markedly cirrhotic. The surfaces of the liver and diaphragm were sponged and scratched with the finger nail and director. The margin of the liver was sutured to the abdominal wall. The patient recovered, but there was no relief from the ascites. He was tapped twelve days later, and this was repeated four times during the month following. When heard from two months later, he was very ill with distended abdomen and edema of the feet and legs.

Case XVII. Grinon, in November, 1899, operated upon a woman, 47 years of age, for ascites. The parietal peritoneum was detached, and the omentum was sutured between. Wound closed without drainage. The patient's general condition improved, and the ascites was diminished. The urine was scanty, prior to operation, but became normal afterwards. The veins of the abdomen became very much enlarged.

Case XVIII. A. A. Bobroff. November, 1899. The patient was a

woman, 38 years of age, with atrophic cirrhosis of the liver. Medical treatment seemed to do no good, and an operation was decided upon. The abdomen was opened under cocaine, and a large amount of fluid evacuated. The peritoneum near the wound was scraped with a sharp spoon. The omentum was sutured to the upper and lower angles of the wound, the suture passing through the abdominal wall. The abdomen was closed without drainage. The operation lasted fifteen minutes. The patient made an uneventful recovery, and gained in weight and strength. There was a slight accumulation of fluid. The veins around the umbilicus became enlarged.

Case XIX. Bossowski, in 1900, operated upon a little girl, nine years of age, with cirrhotic liver for the relief of the ascites, cholecystotomy was done. Her general condition was improved, and the amount of the ascites decreased and returned more slowly.

Case XX. C. H. Frazier reports a case operated upon in July, 1900. The patient was a laborer of middle age, who gave a history of syphilis, and was constant user of alcohol and tobacco. He had a systolic murmur with enlargement of the heart, liver and spleen. The extremities were edematous, and the abdomen greatly distended. The urine showed albumen, but was otherwise negative. He was tapped four times during the two months prior to operation. A local anesthetic was used to open the abdomen, but the pain caused by handling the viscera made it necessary to administer ether. The parietal peritoneum was sponged and the omentum sutured to it. The abdomen was closed without drainage. Tapping had to be resorted to on the thirteenth and thirty-sixth days after operation, 328 and 96 ounces respectively being withdrawn. Three months after, there had been no return of the ascites and the patient was able to be out of doors daily.

Case XXI. Packard and LeConte report two cases operated upon October 13, 1900. The first was a white man, 36 years of age, who had been a constant drinker of beer and whiskey. There was no history of syphilis. He had noticed some swelling of the lower abdomen for the past five years. Tapping was resorted to four times during the two months prior to operation. His urine showed a few hyaline casts. Two incisions were made, the lower one being for drainage. A small hard liver and a very much enlarged spleen were found. The liver, spleen and peritoneum were sponged and the omentum was sutured to the abdominal wall. Adhesive strips were applied to the abdomen. He made a good recovery from the operation; was depressed at times. He lived 61 days after the operation, and died of heart failure and pulmonary edema. Firm adhesions between the liver and the diaphragm and the spleen and abdominal wall were found post mortem.

Case XXII. Packard and LeConte. The patient was a white man, 52 years of age, giving a history of syphilis, and whose mother and sister died of dropsy. He had been a hard drinker. For ten or twelve years he had been passing blood by the bowel. He had noticed swelling of the legs and abdomen about two and a half months before operation. Tapped only once. The operation was similar to the one above, except that the spleen was normal and was not sponged. The liver was hard and nodular, and enlarged. The patient died of uremia four days later. A post mortem examination was refused.

Case XXIII. John B. Roberts reports two cases operated upon December 4, 1900. The first was a man, 49 years of age, who was temperate in his habits and whose father, although temperate, had died of cirrhosis of the liver. An explanatory laparotomy was done 24 days previous to this, after which he had partial suppression of urine with albumen and casts. The last operation was done under a local anesthetic, the peritoneum was sponged and the omentum attached to it with through and through sutures on either side of the wound. He died six weeks later of advanced liver and kidney disease. The omentum was found adherent to the abdominal wall.

Case XXIV. Jno. B. Roberts. The patient, a man, 54 years of age, had been a hard drinker. He had noticed some abdominal distension for eight months, and had been tapped nine times. His general condition was poor. His urine showed albumen and casts. A local anesthetic was used. The abdomen was opened first below the umbilicus, but the omentum could not be reached, so that an incision had to be made above the umbilicus. The omentum was sutured, as in the above case. The patient died of uremic coma the day following. All of the sutures had cut through except one.

Case XXV. N. M. Benisovitch reports a case 22 years of age with cirrhotic liver, probably due to alcohol, who was admitted to the hospital and tapped twice without any relief. A diagnosis of tubercular peritonitis was made, and the abdomen opened under a local anesthetic. The peritoneum was not diseased. There was a temporary improvement after this, but the ascites returned. Talma's operation was done and there was a marked improvement in the patient's condition. Two months later it was necessary to tap him. After that he gained flesh and strength rapidly.

Case XXVI. N. M. Benisovitch. A man, 56 years of age, who gave a history of chronic alcoholism, "was far advanced in the disease when Talma's operation was done." He seemed much improved for two weeks, and then began to decline rapidly, and died within 48 hours. "A rapid and marked accumulation of fluid took place before he died."

Case XXVII. Muscroft and Ingalls' patient was a man, 45 years of

age, who had used wine, beer and whiskey since early manhood. There was no history of syphilis. The symptoms noted were jaundice, abdominal distension, edema of the feet and legs, and weak and rapid pulse. Was tapped once ten days before operation, slight improvements followed, but when operated upon, the distension was as great as at first, and the toxic symptoms were more pronounced. The urine was negative. Liver area was small. The operation was done under chloroform, two incisions being made, the lower one for drainage. The visceral and parietal peritoneum were sponged, and the omentum was sutured to the anterior abdominal wall. Adhesive strips were applied to the abdomen. Toxic symptoms developed during the night, and the patient died 30 hours after the operation.

Case XXVIII. Gaston Torrance. July, 1901. This case was seen first on the 8th of June, and the following history was elicited: J. T., age 45, white, a puddler by trade, married, an Irishman, had one sister to die at the age of 28 with enlarged liver and jaundice; family history was otherwise negative. Has been a hard drinker of beer and whiskey for 25 years. There was no history of syphilis. Had malaria 8 years ago and pneumonia 4 years later. Has always enjoyed good health. About the middle of last December feet, legs and abdomen began to swell. This passed off in about a week. He went back to his work and experienced no inconvenience for two months, when the swelling returned. He has had pain in the epigastrium for the past 18 months. When the abdomen becomes distended, he has pain in the region of the liver, with shortness of breath. Has lost 25 to 30 pounds in six months. He was able to work until about the middle of May. Has not had any hemorrhages from the mucous membranes. Breath sounds slightly roughened, but heard distinctly all over the chest. Some flatness at the bases posteriorly, probably due to the fluid in the abdomen. Heart sounds regular, slight accentuation of the second. Apex beat in 6th interspace 4 inches from the mid line. Liver dullness extends from upper border of the sixth rib to within two inches of costal margin. The stomach enlarged and extending over into liver area. Spleen considerably enlarged. Feet and legs swollen and edematous. Abdomen very much distended. Urine neutral in reaction spec. grav. 1010, no albumen or sugar, no casts. The patient was put on diuretics and salines without any reduction of the ascites and edema. This treatment was kept up until the first of July, when it became necessary to tap him on account of the dyspnoea. The abdomen at this time measured 42 inches at the umbilicus. 384 ounces were drawn off, the fluid was neutral, spec. grav. 1006, showed considerable albumen and was examined for sugar with a negative result. The diuretic and saline treatment was con-

tinued with no apparent benefit. Was tapped again eight days later 256 ounces of fluid being drawn off; and again a week later, with 384 ounces as a result. He was admitted to St. Vincents Hospital on July 20th, for operation. He was passing a normal amount of urine at this time, which was a dark, amber color, clear, acid, spec. grav. 1030, no sugar or albumen found. Microscopically it showed crystals of calcium oxalate and uric acid, a few pus cells, no casts. His blood examination showed haemoglobin 65 per cent., red corpuscles 3,356,000, white corpuscles 8,000. Three days later, under ether, an incision about 3 1-2 inches long was made through the right rectus muscle above the umbilicus. A large amount of fluid was evacuated. The spleen was very much enlarged. The stomach was distended and extended across in front of the liver. The liver was very small, hard and nodular. The gall bladder was distended, filling the hand when grasped. The surfaces of the liver, spleen and parietal peritoneum were sponged and caused some oozing. Two chromicized cat gut sutures were passed through the parietal peritoneum on either side of the wound with a small pedicle needle and through the omentum, and tied so as not to interfere with the omental circulation. The abdomen was flushed out with salt solution and closed with through and through silk worm gut sutures without drainage. The following morning there was some hemorrhage from the mucous membrane of the stomach, which was vomited. He complained of some pain in the right lumbar region the second day. An attempt was made to get his bowels moved without much success. The abdomen became somewhat distended, the temperature went up to 101 F., pulse 128, volume fairly good. His pulse and temperature remained about the same until a short time before he died. Early the morning of the fourth day he became unconscious, with slow and very irregular breathing. Believing that these symptoms were due to uremic poisoning, he was transfused, about 1200 C. C. of salt solution being used. There was only a slight reaction, and he died at 6 p. m., three and a half days after operation. A post mortem examination was refused.

The operation was designed to relieve the portal circulation, it being supposed that the ascites was due to obstruction of the portal vein by the cirrhotic condition of the liver and that if part of this blood current could be turned into the systemic circulation, the pressure in the portal vein would be lowered and that the ascites would disappear. Ralleston and Turner argue that the ascites does not occur when the pressure in the portal vein is presumably the highest, i. e., in the earlier stages when haematemesis occurs; but being a later manifestation, is rather the result of a toxæmic condition of the blood than a mere mechanical obstruction of the portal circu-

lation, and that it is the outcome of a poison in the blood exerting a lymphagoge action. The toxæmic condition is due to the cirrhotic liver being unable to destroy the poisons which are continually passing to it from the alimentary canal, and these getting into the general circulation cause edema of the legs and ascites. Numerous experiments have been made on dogs in which the blood from the portal vein was short circuited, passing into the inferior Vena Cava without having passed through the liver. When they were fed on meat, severe nervous symptoms were induced, depression, asthenia, convulsions, and sometimes ending in death. One of Morison's cases was alternately excited and depressed for three weeks. One of Packard and LeConte's cases was very much depressed at times, as was one of Rolleston and Turner's. This condition was probably due in these cases to the toxic material passing into the general circulation, but there was no return of the ascites, as the theory advanced by Rolleston and Turner would lead us to expect. Packard and LeConte claim that hemorrhages from the stomach and bowel appearing in the earlier stages do not necessarily mean that the pressure in the portal vein is at its height, but may be interpreted as an attempt on the part of nature to establish a collateral circulation, and the bleeding being the result of a varicose condition of those vessels. They also suggest that were the ascites due to this toxic material in the blood, that we would find a dropsical condition in all parts of the body, brain, heart, etc.

There are a few cases on record that have been cured after repeated tappings. R. L. MacDonald reports two cases, one of them was tapped sixty times, 9,000 ounces of fluid being withdrawn; four years later there had been no reaccumulation. The other case was tapped 31 times with about 8,600 ounces of fluid as a result. At first he was tapped every two or three days, and later about once a week, until finally it disappeared altogether.

Drummond has posted a number of cases of cirrhosis of the liver in which there were no ascites, and found vascular adhesions between the viscera and parietes, which probably accounted for the absence of the ascites. In some of these cases the cirrhosis had existed nearly twenty years. Sappey gives the following as the normal circulation of the portal system: Veins connecting the portal vein with the phrenic vein and Vena Azygos Major, and running subperitoneally between the folds of the hepatic ligament. Another large vein running in the round ligament connects the left branch of the portal with the epigastric and other veins of the abdomen. The coronary veins communicate freely with both Azygos veins through the oesophageal plexus and the inferior mesenteric with the internal iliac, by means of the middle and inferior hemorrhoidal plexuses. These veins become very much

enlarged and in some cases do succeed in diverting the blood current when the portal vein becomes obstructed, but in the majority of the cases it becomes necessary to increase this collateral circulation, and this is best accomplished through the omentum.

With the histories of 28 cases before us, the following conclusions have been summed up:

Rutherford Morison:

1. "Ascites due to liver cirrhosis can be cured by the establishment of an effective anastomotic circulation."

2. "Adhesive peritonitis produces adhesions between the abdominal contents and its parietes in which new blood vessels form. If there is any demand for the new blood vessels they remain permanently."

3. "The operation described in the paper by Drummond and myself is the safest and most certain method of producing adhesions."

4. "It is no longer advisable to treat the ascites due to cirrhosis by repeated tapplings, if the patient is otherwise sound and in fair general condition. After one or two tapplings have failed, operation offers the best chance of prolonged and useful life. The obstructed portal circulation has nothing to do with the enlargement of the spleen."

Rolleston and Turner hold that the operation benefits the patient:

1. "By somewhat diminishing the flow of blood through the liver, it may enable that organ to deal more satisfactorily with the blood passing through it, and so reduce the toxæmic condition of the blood, which is probably the important factor in inducing ascites."

2. "That the increased vascular supply to the surface of the liver may, by improving the nutrition of the hepatic cells, enable them to undergo compensatory hyperplasia. The compensatory hypertrophy of the liver will enable the organ to perform more efficiently its important antitoxic functions, and so lead to a latency of the symptoms."

Packard and LeConte:

"It is our opinion that where the diagnosis of pure portal cirrhosis of the liver can be made, and where persistent and well directed medical treatment is productive of insignificant results, that the operation should be strongly recommended. On the other hand, it would seem that the operation is scarcely indicated, if not contra-indicated, in cases of ascites associated with other kinds of cirrhosis (Hanot's, syphilitic, mixed, etc.), or with chronic peritonitis."

Muscroft and Ingalls:

1. "Prognosis is very bad in those cases of long standing presenting toxic symptoms."

2. "Results under both general and local anesthetics are about equal. Theoretically, local anesthesia should be used."

3. "Shock is not noticed, these patients being in better condition after than before operation, due, no doubt, to the briefness of the operation, and the inhibitory action of the bile."

4. "Transfusion should be practiced at the time of the operation."

5. "Early operation should be advised."

Jno. B. Roberts:

"Epiptoexy should, in my opinion, be done as soon as practicable after the diagnosis of cirrhosis of the liver is made. In late cases the operation will probably not be of much therapeutic service. It seems as if there were good physiological grounds for believing it advantageous in early cases."

C. H. Frazier:

"The operation should be performed preferably under local anesthesia, as individuals afflicted with cirrhosis of the liver are usually alcoholics, and belong to a class in which ether narcosis of itself has a very material effect upon the mortality."

"The chief indication for the operation is the presence of ascites due to obstruction of the veins of the portal system, when the obstruction itself is due to cirrhosis of the liver. It should be borne in mind, however, that the operation is not indicated in every case of hepatic cirrhosis with ascites; the operation is absolutely dependent for its success upon the retained function of the liver cells. It has been suggested that the presence of cardiac or renal disease should constitute a contra-indication, but this might be regarded rather as a relative than as an absolute one."

Of the ten cases of this series that were cured, seven of them simply had the omentum sutured to the abdominal wall; Nos. 6, 9, 11, 12, 18, 20, 25. In No. 6, Talma did suture the gall bladder also, but the surfaces of the spleen and liver were not irritated at all. I am convinced that this is the best operation, as there is always more or less oozing from these irritated surfaces, and this makes an excellent culture medium for any germs that may accidentally get into the abdomen. Besides, the operation was designed to relieve the strain on the liver cells, and we should attempt to divert as much of the current from the liver as possible, and I, therefore, believe we should not attempt to form any adhesions between the liver and the abdominal wall. If I should have an opportunity to do the operation again, I shall tap my patient the day of the operation, and make a small incision with a local anesthetic, and simply suture the omentum without even exploring the abdomen."

The following table is an epitome of these 28 cases:

Death within two days.....3	10.72 per cent
Death within one week.....3	10.72 per cent

Death within two weeks.....2	7.13 per cent
Death ultimately5	17.86 per cent
Cured10	35.72 per cent
Improved2	7.13 per cent
Unimproved3	10.72 per cent
28	100.00 per cent
Died13	46.43 per cent
Recovered15	53.57 per cent
28	100.00 per cent

If we deduct from the table Morison's case, No. 8, which had a large ovarian cyst, and Weir's case, No. 10, which had a large echinococcus cyst of the liver, it will read as follows:

Death within two days.....3	11.53 per cent
Death within one week2	7.70 per cent
Death within two weeks1	3.84 per cent
Death ultimately5	19.23 per cent
Cured10	38.47 per cent
Improved2	7.70 per cent
Unimproved3	11.53 per cent
26	100.00 per cent
Died..11	42.30 per cent
Recovered15	57.70 per cent
26	100.00 per cent

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ACUTE DYSENTERY.*

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According to the best information at my command, acute catarrhal dysentery has prevailed more extensively throughout West Tennessee during the past season than it commonly does, and having treated not a few cases during the past summer, as well as during the previous summer and fall seasons, stimulate me to undertake writing a paper on this subject.

Acute dysentery, as met with in this section of the country, is usually of the catarrhal type characterized by prodromata more or less marked, anorexia and colicky pains in stomach or abdomen, with frequent stools mixed with mucus, blood, and sometimes pus; tenesmus fever and prostration, which in some instances is pronounced. It is an infectious disease involving the mucosa of the large intestine. In temperate climates dysentery is endemic, but in the tropics it is epidemic. Sporadic cases of amoebic dysentery sometimes occur in temperate zones, but they are the exception.

Etiology—There are three types of dysentery, each of which has special etiology factors, but with what I shall have to do will be the factors which enter into the causation of the catarrhal type.

Season probably heads the list of causes, the great majority of cases occurring during the summer and autumn. Sudden and violent changes of atmosphere are more important than an even temperature with moisture. Climate unquestionably plays an important part, and high temperature must be regarded as a powerful agency, since the disease is more prevalent in hot than in cold climates. Unhygienic conditions, it matters not of what nature, predispose to the affection. It is claimed by some that malarial districts suffer more than non-malarial. This fact, in the humble judgment of the writer, is explainable on the grounds that the external conditions which favor the development of malaria or its plasmodia, may, in a like manner, favor the growth of the dysenteric poison. Part of my cases bear out this theory, but not all by any means. Individuals whose vitality is below par because of attacks of malaria, may be more susceptible to the infection of dysentery, as they would be to many other diseases, but further than this it occurs to me that malaria plays no part. Improper food, particularly unripe or decomposed fruit eaten by individuals whose digestive tract is in a catarrhal state, are pronounced factors in the causation of this trouble. It is not known, or it has not yet

*Read before the Tri-State Medical Society of Alabama, Georgia and Tennessee.

been proven, at least, what the specific bacillus of catarrhal dysentery is, but it is probably the bacillus coli communis, which may become pathogenic under favorable circumstances.

Symptoms—The attack may be initiated by a chill. In a large per cent of my cases it was not, but chilly sensations running up and down the spinal column were common. The stools at first are not frequent, no more than six or eight in the twenty-four hours, and they are painless; but they gradually increase in frequency until there are from two dozen to a hundred or two in the twenty-four hours. In fact, the desire to go to stool may become constant, and there is much tenesmus and straining. The character of the discharges varies according to the stage of the affliction. At first they are feculent or scybalous and rather copious, containing some mucus and blood, but after the first day or two they are small and less feculent until blood mixed with pus is the chief constituent. In severe forms of the disease, shreds of necrosed mucus membrane appear in the discharges. The frequency of the stools increases during the first week, which, if the attack is moderate in severity, becomes less frequent during next few days until there are not more than six or eight in the twenty-four hours and they are pultaceous or semi-solid. In the more severe types, at the end of the first week, the amount of blood diminishes, and a brownish material with mucus which is opaque appears in the stools. During the second or third week the stools are less frequent and are of a greenish cast which becomes mixed with some fecal matter until finally they are of normal consistency. The course of the disease of the milder types is about eight or ten days, and in the severe types of about three or four weeks. In a few instances the affection tends to become chronic, which fact, in my opinion, is explainable on the grounds that there is a sequel to be looked for and this was the case in a few instances of my cases which will be referred to in detail later on. The tongue moist at first with a slick or greasy coating gradually becomes dry and is red or glazed. The pulse may not be much disturbed at first, but as the disease progresses, it becomes more frequent, reaching 110-15 or 20 per minute, and in severe types of the disease, it becomes very small and rapid, and hardly perceptible at the wrist. The skin is moist, cool and clammy. The temperature does not run high rarely reaching more than 102 or 103 F.

The series of cases which I shall now report will not be described in detail unless some of them justify it by their erratic symptoms and course. Each case will be referred to in order of number with treatment appended as used in that case. Sulphate of magnesia was used as a routine measure to evacuate the intestinal tract before other treatment was used.

Case I. W. N. aet 30 years, male, married. He was, until taken sick, a robust, healthy man. Sick twelve days. Treatment, Opii. Bismuth and Lead Acetate, died. I saw in consultation with D. R. the day before he died.

Case II. J. H., aet 26 years, male, single; sick two or three months, the latter part of the attack becoming sub-acute. Treatment during first two or three weeks consisted of opium to confine the bowels, strychnine to support the heart, but as the case did not get well under these measures, Sulpho-Carbolate of Zinc in five gr. doses every four hours was added to the treatment. Recovery to normal health was the final result.

Case III. H. M. F., aet 41 years, male, married; had an ordinary attack of rather mild type, which was treated with opium and bismuth-sub. ni. with recovery in ten days. This was fourth or fifth attack, he being subject to an attack about once a year.

Case IV. E. O., aet 20 years, male, single; had an ordinary attack from which he recovered in about twelve days under opium bismuth and lead treatment

Case V. R. O., aet. 25 years, female, married; was taken violently and was very sick for three weeks. Treatment consisted of opium, bismuth and lead to confine bowels, which it did not do. Sulpho-Carbolate Zinc in 5 gr. doses every 4 hours was added to treatment without effect. Strychnine in colossal doses was administered at one time to support the heart's action, which had almost ceased to beat, and it was continued in 30 gr. doses throughout third and fourth weeks. A rectal examination at end of fourth week revealed a large ragged ulcer on posterior wall of the rectum, just within the sphincters, which was cleansed and cauterized with 10 per cent. sol. silver nitrate. This was repeated every third day until patient was convalescent, which was in two weeks.

Case VI. A. B., aet 58 years, male, married; treatment, opium to confine bowels, silver nitrate in 1-4 gr. pill t. i. d. This latter drug was given because there was present a catarrh of the stomach. Strychnine was used, patient grew worse, so his lower bowel was irrigated once daily with nitrate of silver sol. 30 grs. to the pint. The patient gradually grew worse, and died at the end of two weeks.

Case VII. S. H., aet. 38 years, male, married. This patient was taken violently ill from the first. Blood appeared in the stools from the beginning and the purging was alarming. The patient remained on stool almost constantly until he was nearly exhausted. Treatment consisted of morphine hypodermically, guaiacol carb. in 5 gr. dose by the mouth, strychnine hypodermically. The lower bowel was irrigated with nitrate silver sol. once daily, commencing 10 grs. to

the pint and increasing in strength until a drachm to the pint was used, and from one to three pints of this solution was used at a time. Patient recovered sufficiently to be up and about, but his bowels never entirely checked, and on account of this, I made a rectal examination with speculum which revealed three small rectal ulcers just within sphincters. These were painted twice a week with 5 per cent. nitrate silver sol—recovery in two weeks.

Case VIII. M. H., aet. 33 years, female, married; sick eight days; recovery under opii by the mouth and nitrate of silver irrigations

Case IX. M. K., aet. 16 years, female, single; recovery in 14 days under salol, bismuth and acetate of lead.

Case X. G. M., aet. 34 years, male, married; sick four weeks with final recovery under opium and strychn. by the mouth; nitrate of silver irrigations, drachm to the pint, of the lower bowel.

Case XI. G. P., aet. 37 years, female, married; sick two weeks. Morphia hypodermically, guaiacol carb. in 5 gr. doses every 4 hours by the mouth, and nitrate silver pill 1-4 gr. t. i. d. was the treatment used—recovery. I have learned recently that this patient succumbed about a year later in another attack.

Case XII. L. S., aet. 52 years, female, married; sick for five weeks; treatment, opium and guaiacol carb. by the mouth; nitrate of silver irrigations, 30 grs. to the pint, of the lower bowel. This patient was very slow in making a recovery, and in my opinion due to the fact that some years since she sustained a complete laceration of the perineum, and having no control of the anal sphincters, she was unable to retain the enemas, yet, with a pad or towel pressed firmly against anal region and her hips, which were highly elevated, she would retain them for two or three minutes. She improved day by day a little until there was not more than two or three stools in the twenty-four hours.

Case XIII. A. J., aet. 58 years, male, married, sick 32 days. Treatment was opii, bismuth, guaiacol carb. and nitrate of silver pills in 1-4 gr. dose, and strychn. to support heart's action. Bowel would not tolerate nitrate of silver enemas. Recovery.

Case XIV. J. S., aet. 9 years, male. Sick eight days. Treatment, Dover's powder by the mouth, nitrate of silver enemas, 10 grs. to the pint at first, and increased in strength until 20 grs. to the pint was used. Recovery.

Case XV. W. B., aet. 30 years, female, single. Recovery in ten days under opii and guaiacol carb. by the mouth, and nitrate of silver enemas, 30 grs. to the pint.

Case XVI. J. M., aet. 8 years, male. I saw this patient in consultation with Dr. P., October 1, 1899. He had been sick twelve days. The

treatment had been opii., and ipecac by the mouth. I suggested enemas of nitrate of silver in weak sol. 5 grs. to pint to commence with, to be increased in strength until 20 or 30 grs. to the pint had been reached and to be used once in the 24 hours. Patient died ten days later.

Case XVII. R. E., aet. 42 years, married, female. Treatment, opii and guaiacol carb. by the mouth; nitrate of silver enemas, commencing with ten grs. and gradually increased to 3 drachm to the pint. Patient died at end of second week. She was in bad condition from beginning, having been in feeble health for years.

Case XVIII. L. W., aet. 32 years, female, married. Treatment, guaiacol carb. and acetate of lead by the mouth; nitrate of silver enemas tried but bowel would not tolerate them, so acetate of lead, drachm to the pint, was used with good effect. Recovery in ten days.

Case XIX. L. E., aet. 39 years, male, married. Treatment, opii. and guaiacol carb. by the mouth; enemas of silver nitrate up to drachm to pint. Patient got up on his feet but did not get well until I painted two or three small rectal ulcers with 6 per cent. sol. nitrate of silver thrice weekly for a couple of weeks.

Case XX. J. S. H., aet. 35 years, female, married. Sick four days. Treatment, opii and strychn. in very large doses. Quinine was added to the treatment after first day, as she began to have chills. She was markedly anaemic and cachetic, having just come from the Forked Deer river bottom. Her bowels acted almost continuously during fourth and last day, at the end of which death of the patient resulted.

Case XXI. N. L. aet. 59 years, male, married. Sick a week. Treatment, opium by the mouth and strychn. hypodermically; nitrate of silver irrigation, 30 grs. to the pint, once daily. Recovery.

The next four cases occurred in the same family.

Cases XXII. and XXIII. G. P. and W. P., were 16 and 14 years of age respectively, and females. They were sick eight days each; recovery. Treatment, opii. and guaiacol carb. by the mouth; nitrate of silver irrigations, commencing with 5 grs. to the pint and gradually increasing to 20 grs. to the pint.

Case XXIV. J. D. P., aet. 5 years, male. Sick three weeks. Treatment same as in two preceding cases. Death. This little patient was taken violently ill in the afternoon, and he had during the night fully 50 evacuations.

Case XXV. B. P., aet. 9 months, male. Sick two weeks. Treatment, bismuth and salol by the mouth; nitrate of silver irrigations, 5 grs. at first to the pint and increased to 15 grs. to pint. Patient gradually grew worse and died.

Case XXVI. E. B., aet. 35 years, female, married; sick two weeks. Treatment, opii. and guaiacol carb. by the mouth; nitrate of silver irrigations, increased in strength until drachm to pint was used. Recovery, sufficient to be up, but not complete. A rectal examination revealed an ulcer which was cleansed and painted twice a week with 5 per cent. aqueous sol. of nitrate of silver—complete recovery after half a dozen such applications. This patient had an attack during the summer of 1900, one year previous to this one.

Case XXVII. J. M., aet. 32 years, female, married. Sick one week. Treatment, opii. and guaiacol carb. by the mouth, nitrate of silver irrigations, commencing with 20 grs. to the pint once daily, and gradually increasing to drachm to pint. Recovery.

Number of cases treated, twenty-seven; number of deaths, seven; giving a mortality of nearly 26 per cent.; but when we exclude two of the deaths, one an infant and the other in a state of marked cachexia from malarial infection, the mortality of such cases being high, we may very safely say that the mortality was about 20 per cent. The average number of days for all cases, thirteen and one-third; but when we select the cases in which irrigations of silver nitrate was used without complications, this number may safely be reduced to ten and one-half or eleven. The conclusions I have reached in the management of these cases are, that the mortality of this type of dysentery may be reduced some 10 per cent., and its course cut short from one to two weeks by the prompt use of some irrigating measure, nitrate of silver in solution being one of the best.

INFLUENZA.*

By A. W. SIMS, M.D.,

BIRMINGHAM, ALA.

Influenza may be described as an acute infectious disease occurring endemically, epidemically and pandemically, characterized by an elevation of temperature, great prostration, catarrhal inflammation of any or all of the mucous tracts, and special phenomena dependent upon the clinical variety. In this disease we have a local infection, giving rise to constitutional symptoms through the agency of toxins.

The history of this disease can be traced with certainty to the year 1510, although it appears to have prevailed as early as 1173 in Italy, Germany and England; and since this time has made its epidemic or pandemic appearance on nearly 100 different occasions. It is remarkable for the rapidity with which it spreads, the infection seeming

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to travel as fast against the wind currents as with them. Since the epidemic of 1889-90, the United States has never been free of the disease, there being epidemics in many cities each year.

ETIOLOGY. This may be conveniently divided into the predisposing and exciting causes.

I will only make mention of the predisposing causes, as they differ in no way from the factors entering into the causation of other acute infections. Under this heading can be placed bad hygienic surroundings, debilitating diseases which lower bodily and individual tissue resistance, sudden changes in the weather, catarrhal states of the mucous tracts, etc.

The exciting cause is a slender, short bacillus with rounded extremities, that stain deeply with anilin dyes, carbol-fuchsin for instance. This bacillus was isolated in 1892 by Pfeiffer, who found it in the pus cells of sputa from infected subjects, and can be demonstrated in cover glass preparations stained as above stated. The bacillus of Pfeiffer is peculiar in that it develops artificially only on culture media, which contains blood or blood coloring matter. It is best grown on agar-agar slants in petri dishes, over which a small quantity of sterile blood has been smeared (not serum). When grown in this way the colonies appear as minute dew drops which do not coalesce. The optimum temperature for growth is 37° C. In making culture for diagnostic purposes it is well to use a control plate of agar on which no blood has been smeared for the reason that growth of these peculiar colonies on the former and not on the latter is evidence that one is dealing with the bacillus of Pfeiffer. Outside the body the bacillus is easily destroyed by rapidly drying for two or three hours, and under ordinary conditions in eight to ten hours. In water the organism dies in about 30 hours. Considering the above facts, we must suppose that the disease in the majority of instances is disseminated by direct infection from the catarrhal secretions of the patient rather than by air or water. Another peculiarity is that the bacillus influenzae is rarely obtained by culture from the blood of patients suffering with the disease, and seems to have no special capacity to invade the blood stream. From this we must infer that many of the remote complications accompanying an attack are not due to this special bacillus, but to others notably the pneumococcus and pyogenic organism which have gained entrance to the circulation, or anatomical structures, and set up their process by reason of the lessened tissue resistance caused primarily by local process or absorption of toxins generated by the bacillus influenzae.

MOREID ANATOMY. Anatomic alterations distinctive of this disease are not known. The lesions found along the mucous tracts are

those of any acute inflammation with the exception that the bacillus of Pfeiffer can be demonstrated usually in connection with the pyogenic organism. The spleen is slightly enlarged, soft and diffuent and the internal organs to some extent hyperaemic. The morbid anatomy is essentially that of its complications.

Before proceeding to a consideration of the symptomatology of this disease it might be well to pause for a few moments and take up the clinical forms in which it is manifested.

Authors vary on this point, some basing a classification on its complications, but I shall only endeavor to consider separately those which are characterized by symptoms referable to certain organs, and make a classification based on the anatomical seat of the disease. While there can be no sharp line of demarcation drawn between the different clinical varieties, yet the symptoms when studied carefully in certain cases point unmistakably to involvement of the pulmonary apparatus in one case, the alimentary canal in another, while the nervous or muscular system suffers most in others; hence I have divided this affection into the following clinical varieties, and we will try and consider each one separately.

1. The thoracic or pulmonary form.
2. The abdominal or gastro-enteric form.
3. The cerebro-spinal or nervous form.
4. The muscular rheumatic form.

SYMPTOMATOLOGY. In considering this aspect of the disease, I will first mention the symptoms which are as a rule common to all varieties. There is no typical mode of onset, the disease sometimes being ushered in with a chill or chilly sensation followed almost immediately by a rise in temperature which may be slight or alarming in extent, while at other times there is only a slight feeling of indisposition with coryza, lacrymation, slight headache, etc. The temperature does not conform to any particular type, but is usually irregular, the chart showing considerable variations in the curve. In the majority of cases the pulse rate is increased in proportion to the temperature, but may be beyond what would be expected, or exceptionally slow. Prostration is pronounced, and accompanied by headache and muscular soreness. Felix Franke has recently called attention to a group of phenomena which he considers pathognomonic. These are a red striated band on the anterior faucial arches which does not include the uvula, and associated with this a swelling of the papillae of the anterior part of the tongue. In the thoracic or pulmonary form, in addition to the symptoms already mentioned, there is evidence of a catarrhal inflammation of the respiratory tract which may be more or less localized, or involve the whole tract from the nose to the pul-

monary alveoli, giving rise to symptoms according to the location and extent of the disease. Foremost among these is cough, the character of which varies in individual cases. I do not consider it here necessary to go into detail, and enumerate the different symptoms as they are familiar to all present, and vary in no particular from those caused by acute inflammations of other origin.

In the abdominal or gastro-enteric variety the infection seems to have spent most of its force on the stomach and intestines, as manifested by an onset with nausea and vomiting, and in some cases a severe diarrhoea, which seems almost uncontrollable with ordinary remedies. In this case we have a veritable gastro-enteritis to deal with caused by the bacillus influenzae, these having been demonstrated in culture from the follicles of Lieberkuhn. In addition to the symptoms referable to the stomach and intestines, we have disturbances of other viscera, as the kidneys, liver, etc., due primarily to the congestion of the alimentary tract and manifested secondarily in these organs.

Cerebro-spinal or nervous variety. In this type of the disease the bacillus, or rather the toxins generated by it, make a profound impression on the nervous system, giving rise to symptoms varying from simple headache to delirium and paralysis.

In the muscular variety the patient complains principally of severe pains in the muscles, especially the deep muscles of the back and those of the extremities and describe it in saying that they feel as though they had been beaten with a stick.

DIAGNOSIS. There seems to be a disposition on the part of physicians to diagnose every case beginning with the initial symptoms of grip, coryza, elevation of temperature, cough, etc., as a true case of influenza when really the patient is suffering with an acute cold. There also seems to be a disposition on the part of the laity to want to have grip, and when once they have been told by a neighbor who has just recovered from a so-called attack or have convinced themselves that they have "The Grip" it is absolutely necessary in order to keep "peace in the family" to diagnose it as such. The diagnosis of an ordinary case of influenza is usually easy, especially during the course of a known epidemic. The prostration and temperature out of proportion to the local manifestations, sudden onset, vague pains, etc., serve as sufficient data; however, a positive diagnosis can only be arrived at by microscopic examination of the catarrhal secretions and demonstration of the bacillus influenzae. The urine shows nothing distinctive in this disease, but should always be examined for reasons mentioned later. Examination of the blood should be made when any doubt exists as to the nature and character of complications. During

the active stage of the disease the red cells show no alteration. Uncomplicated cases of influenza show an absence of leucocytosis as in sixty-seven cases reported by Cabat the count was either normal or reduced; therefore an increase in the white cells points unmistakably to complication, foremost among which is lobar pneumonia. Grippal catarrhal pneumonia does not cause any increase. On account of the well known tendency of grip to light up afresh latent disease of any of the organs, especially the heart, lungs and kidneys, a systematic investigation of the condition of these organs should be made, as it is possible by proper treatment directed towards strengthening the weakened organs to keep them in the best possible condition to withstand the inroads of the influenzal toxæmia. The heart and lungs should be carefully examined for any evidence of already existing pathologic change, and the urine for any trace of disease along the genito-urinary tract, and especially nephritis. In this disease it is essential that your diagnosis should include the condition of the patient as well as a name for the disease.

Again referring to the clinical varieties we will allude to the diseases from which it must be differentiated. In the pulmonary form with sudden onset after exposure, chill, rapid rise of temperature, great prostration and evidence of pulmonary irritation, it is impossible to distinguish between grip and lobar pneumonia in the first twenty-four hours, but given a little time, with an opportunity to hedge the presence or absence of physical signs of consolidation, will settle the matter, except in cases of central pneumonia, and here the blood count for leucocytosis as before referred to is of service. Lobular pneumonia is to be differentiated by the clinical history and physical signs of that disease. In its milder forms it must be differentiated from acute bronchitis, acute cold, etc.

The gastro intestinal form must be differentiated from the same condition due to usual cases, and here the prostration, elevation of temperature above what should be expected, pains and headache if present would point to a diagnosis of influenza. When the onset of grip is more insidious from typhoid fever by the absence of the typhoid temperature curve, rose spots, diarrhoea, etc., as compared with the prostration, irregular temperature, pains, etc., of influenza. The muscular or rheumatic variety from rheumatism.

The cerebro-spinal or nervous variety is to be especially differentiated from cerebro-spinal meningitis. Aside from the special symptoms which are peculiar to the latter disease, I will only call attention to examination of the cerebro-spinal fluid obtained by lumbar puncture for the meningo coccus, and the existence of marked leucocytosis.

COMPLICATIONS.—Under this heading it will be impossible to

consider all the complications of grip in detail, as they are so numerous, that even simple mention would consume too much of your time, and I will endeavor to allude only to the most important.

Foremost among these are broncho and lobar pneumonia, the former being caused by an extension of the inflammatory process to the smaller bronchi and air cells, while the latter seems to be dependent upon secondary infection by pneumococci, the already lowered tissue resistance acting as a predisposing factor. Likewise we may have any variety of pleural affection, varying from a simple plastic pleurisy to a pyo-pneumo thorax. The heart suffers necessarily from the toxæmia present, and may be the site of serious complication. Among those in the vascular system may be mentioned phlegmasia alba dolens, and other thromboses. Ford reports 18 cases of acute arteritis following influenza. This occurs especially in those past middle life, and existing degeneration of some of the coats of the vessel seems to have some influence on its development. The vessels most commonly affected are those of the lower extremities. The complication is not made manifest until convalescence has been established or after apparent recovery. In the nervous system we may have complications affecting the central nervous system or peripheral nerves. Of most importance among the former class is cerebro-spinal meningitis caused either by secondary infection or by an extension of the grippal inflammation through some of the sinuses. Localized cerebral abscess may occur from the same causes. From the toxæmia we have a toxic polyneuritis affecting the peripheral nerves, which affection varies in no particular from the neuritides caused by other toxæmias, as in diphtheria. Among the affections of the organs of special sense which occur as complications, otitis media stands at the head of the list. This is caused by a direct extension of the inflammatory process through the Eustachian Tube to the middle ear, and may be limited to a catarrhal process or give rise to suppuration. From the middle ear by extension the mastoid cells are frequently involved. All or any of the accessory sinuses communicating with the nose or pharynx may become the seat of a simple or purulent inflammation.

By extension through the nasal duct and lachrymal canal we may get a purulent inflammation of the eye requiring special attention. The loss of blood in some form, varying from a tinging of secretions to profuse hemorrhage, many cases of which have been reported, not only adds to the debility, but may even be the direct cause of death.

PROGNOSIS.—The prognosis of uncomplicated cases in young adults, is good, both as to recovery and after effects, especially if confined to the bed; but in the aged or debilitated death not unusually occurs from prostration and the gradually increasing weakness. In

complicated cases the prognosis depends on the character and extent of the secondary process, always bearing in mind the debilitating influence of grip in connection with the seriousness of the complication.

TREATMENT.—It is hardly probable that any method of prophylaxis can be of much avail, as the disease seems to be disseminated regardless of any measures which may be instituted to prevent spread, however, it would be desirable in all cases to have patients deposit catarrhal secretions in a vessel containing an antiseptic solution. The treatment of the disease is wholly symptomatic, dependent upon the clinical variety. The coal tar products unfortunately seem to be the most active in controlling the fever, pains, etc. I say unfortunately, as in many cases, while affording relief, they add greatly to the debility of the patient by their depressant influence; and, if used, should be discontinued at the earliest practical moment, and a tonic, stimulating treatment instituted in their stead. The salicylates have also been highly praised, but are subject to the same objections with additional contraindications to be mentioned later. Quinine is often given in combination in small doses, and does good; but has its objections in certain cases. In the pulmonic variety attention must be given to the cough, which is usually annoying, and treatment instituted according to conditions present, every case being a rule unto itself. If the inflammation involves the upper air passages it is well to use some bland antiseptic spray for the double purpose of allaying irritation, and rendering the secretions as nearly antiseptic as possible. The nose and throat should be sprayed with a view of preventing spread to the middle ear and sinuses.

When inflammation is marked in the upper air passages, especially the nose and pharynx, quinine or the salicylates should not be used on account of their tendency to cause congestion of the aural apparatus, thus favoring the development and spread of the process. I was convinced of this in my own case, in which I developed an otitis media which I think could have been avoided if it had not been for the quinine and its congestive influence.

In the gastro-enteric variety we have to deal not only with the disease and its consequent debility, but have another factor which greatly increases the weakness, in the inability of the patient to take and assimilate the proper amount of nourishment. This fact must not be ignored, as its influence will certainly be evidenced by a prolonged convalescence and a general weakness which may take some time to overcome.

The general treatment of this variety is that of any acute gastro-enteritis. The treatment of the nervous variety is entirely symptom-

atic. In the muscular variety the pains may be so severe as to require the administration of morphine for their control. Heat applied locally, and especially by means of a hot salt bag seems to have a beneficial effect. It is in this form that a combination with the salicylates proves effective.

Speaking in a general way, the treatment of influenza should at all times be supportive as well as curative.

The American Association of Urologists was organized on Feb. 22, 1902, essentially for the purpose of further development of the study of the urinary organs and their diseases. Although most of the founders of the association are specialists in genito-urinary diseases, membership is not limited to those engaged exclusively in this specialty. Thus gynecologists who embrace renal and vesical surgery in their work are among the founders, as there are several gentlemen who devote themselves to the microscopy and chemistry of the urine, as well as a number of practitioners interested in the study of the kidney from a medical standpoint. The association consists of active, corresponding and honorary members, and is in great measure modelled upon the plan of the Societe Francaise d'Urologie, modified to suit American circumstances and conditions. Thus, whenever possible, the branch associations, throughout the United States, British Possessions and Spanish America will hold their meetings on the same evenings as does the parent association in New York (the first Wednesday in each month). The work of the association is principally clinical, for the demonstration of new methods of the technique of examination and treatment. The annual meeting of the American Association of Urologists will be held on the last day and the day following the annual meeting of the American Medical Association. The officers of the association are: Ramon Guiteras, M. D., President; Wm. K. Otis, M. D., Vice President; John Van der Poel, M. D., Treasurer; Ferd C. Valentine, M. D., Secretary; A. D. Mabie, M. D., Assistant Secretary.

LA GRIPPE.

Benzoate Soda	1-2 oz
Glycerine	1 oz
Tongaline	4 ozs
Aqua Mentha Pip	2 ozs
M. Sig.—Tablespoonful every two to four hours.	

Selected Articles.

A CONTRIBUTION TO THE THERAPEUTICS OF PEPTO-MANGAN, "GUDE."

By DR. LUDWIG POHL,

City Physician of Vienna, Austria.

It is about five years ago that I first had occasion to test Gude's Pepto-Mangan. The curative results obtained from its use were so surprisingly good that I decided to thoroughly experiment with this preparation on my abundant clinical material, the outcome of which is reported in this article.

The number of remedies introduced into the market every year are so numerous that for this reason alone it would be impossible to employ all of them, even if only experimentally, or to make a careful choice. Pepto-Mangan appealed to me strongly in the first instance for reasons that I shall explain. Although inclined to think well of this preparation from the first, I would remark that my observations were instituted without bias, and that my investigations were carried out in a strictly scientific manner.

I was led to make a thorough study of this preparation by the subjective statements of the patients that it never caused the least disturbances, the objective evidence of improvement, and, besides these, by the following considerations.

According to the views of many authors, iron preparations, to be efficient, must exert not only a local, but distant, that is, general effect. In chlorosis and in many severe cases of anaemia chalybeates are said to remove the hydrogen sulphide, formed frequently in large amount in the alimentary tract, by the combination of the iron with the sulphur. This removal is necessary, because hydrogen sulphide, if present in too large quantity, renders impossible the absorption of the iron in the food by precipitating it in the form of sulphide of iron. It is known, however, that not only iron but also manganese is adapted in a high degree for taking up hydrogen sulphide. Manganese therefore acts as an auxiliary to iron in this respect.

Another circumstance was decisive for me. A large number, almost all, of the officinal ferruginous preparations are absorbed only to a slight extent when administered internally. This can be maintained on the ground of the fact that in animals and human beings positive evidence of the entrance of these preparations into the blood cannot be obtained if the persons experimented with have not intestinalcatarrh or have not received excessive doses of iron. The more the preparation

approximates to the form in which iron is contained in the food, the more likely it is to be absorbed. The peptonizing of an iron preparation is therefore of decided advantage, as its absorbability and assimilability is thereby enhanced to a considerable degree. Aside from this, the peptone combination is adapted for exerting the systemic effect. This general action of iron preparations only takes place if after absorption they undergo conversion into hemoglobin. Hence this conversion is only possible in the case of preparations which contain iron in form of an organic combination. They will then act even when containing a much smaller percentage of absolute iron.

It was therefore the chemical constitution of the preparation which appealed to me, and which induced me to undertake extensive experiments.

The cases in which I employed Gude's Pepto-Mangan comprised chiefly the poorer class of people. I mention this particularly, because with these patients it is difficult or well nigh impossible to pay attention to the hygienic conditions or to consider the dietetic side of the treatment. Notwithstanding this the results were favorable. Of course, they were most satisfactory in the case of those patients who were also able to carry out the hygienic and dietetic regulations.

Numerous cases of chlorosis, anaemia, neurasthenia, and hysteria, as well as two cases of malarial cachexia, were submitted to careful and thorough observation.

In many cases determinations of the bodily weight, measurements of the blood pressure, estimates of the hemoglobin percentage and blood counts were made.

As regards the bodily weight, I observed in sluggish, obese, chlorotic patients a reduction in flesh as well as improvement of the general state. The high absorbing power of the preparation and its ready conversion into hemoglobin increases the oxygen capacity of the blood; *pari passu* with this there is an improvement of the metabolism, the oxidation, which takes place at the expense of the non-nitrogenous elements of the body, that is, the adipose tissue. In the case of lean persons I combine with this treatment rest in bed for several weeks, to which may be ascribed the increase of bodily weight observed.

There was a constant change in the conditions of blood pressure. In almost all the chlorotic patients the blood pressure, estimated by Basch's sphygmomanometer, became considerably higher. In many of my cases I noted improvements in the blood pressure of 40 to 60 millimetres in the course of four weeks. Besides this, the fluctuations of blood pressure, so frequently observed during changes of position, disappeared; the pulse frequently diminished considerably; and the subjective disturbances connected with the circulatory apparatus,

especially the troublesome palpitation of the heart, subsided. I would remark that this amelioration occurred under the use of no other remedy in so short a time as under that of Gude's Pepto-Mangan.

In judging the value of an iron preparation, conclusive evidence is afforded by estimates of hemoglobin and blood counts. To determine the hemoglobin I employed Fleisch's hemoglobinometer, and as a solvent a 0.6 per cent. sodium chloride solution; for bloodcounts I made use of the apparatus of Thoma-Zeiss and a 2.5 per cent. solution of potassium bichromate for the red blood corpuscles; the white were not counted.

To demonstrate the changes in the hemoglobin and in the number of red corpuscles, I report here the history of a girl, 16 years old, affected with marked chlorosis. The disease was of almost two months' duration and attended with general functional disturbances. There were present mental anxiety, a disinclination to work, to enjoy life, or move about, marked muscular weakness, cardiac palpitation, difficulty in breathing, loss of appetite, headache, vertigo, restless sleep alternating with sleeplessness. The patient came from healthy parents, had always been previously healthy, and menstruated for the first time in her fifteenth year, but scantily and irregularly. Marked pallor of the skin and mucous membranes was noted; the lungs were normal. The area of cardiac dulness was enlarged toward the right side; blowing murmurs were heard all over the valves, and a bruit over the jugular vein. The radial artery was very small and soft; the pulse frequently 110. The spleen and liver were normal in size; there were no glandular swellings; the bones were not tender to pressure. The urine contained no abnormal constituents.

The percentage of hemoglobin in the blood was 35 per cent.; the number of red blood cells 2,700,000 to the cubic millimetre. The white cells were not increased; otherwise the condition of the blood was normal.

The treatment was as follows: The patient was advised to live on a mixed diet, with an abundance of fresh air and moderate outdoor exercise. She also took three teaspoonfuls of Gude's Pepto-Mangan daily.

The increase of hemoglobin and of the number of red corpuscles is shown in the following:

	Hemoglobin.	Red Corpuscles.	
At the end of 1st week....	45 per cent.	3,260,000	
At the end of 2d week....	60 per cent.	4,100,000	To the Cubic
At the end of 3d week....	70 per cent.	4,500,000	Millimetre.
At the end of 4th week....	75 per cent.	4,900,000	

Before proceeding with the history of this case I would emphasize the fact that the number of red blood cells increased more than one and one-half million, while the increase of hemoglobin amounted to more than 100 per cent. Such marked improvement in the condition of the blood under the treatment with Gude's Pepto-Mangan was not unusual, but rather the rule in chlorosis. And it may be assumed with certainty that the above described effect is attributable to the high absorbability of this preparation as compared with the numerous other chalybeates, and further, to the combined action of iron and manganese upon the blood-forming organs. I would add that numerous investigators, such as Hannan, Kugler, and many other authors, have called attention to the important part played by manganese both in the blood and as a hematogenic remedy.

In the case under consideration there was a perceptible improvement in the patient's subjective and objective state. The existing disturbances subsided gradually; the cardiac palpitation, loss of appetite, and sleeplessness disappeared, and after four weeks' treatment she was discharged cured.

It is not the purpose of this report to detail numerous histories of cases, and I shall content myself with briefly mentioning that I have treated more than 100 cases of chlorosis with Gude's Pepto-Mangan with as good results as those above described, except that in some instances the results did not appear as promptly. The fact cannot be sufficiently emphasized that during the entire course of treatment the remedy did not have to be discontinued on a single occasion, although this must be often done with other ferruginous preparations. I never heard a complaint that the preparation was not well tolerated; on the contrary the patients said they did not experience the slightest disturbance even during its prolonged use, and that it acted mildly, was well borne, caused no disturbance of digestion, but rather promoted the latter, and was free from any disagreeable taste.

I have previously mentioned that it may be positively assumed that Pepto-Mangan "Gude" stimulates the hematopoietic organs to increased activity. Numerous blood findings discovered casually by me, the appearance of the so-called immature forms of blood corpuscles, constrain me to take this view. Of much greater importance is the circumstance, however, that in numerous diseases of the blood occurring in connection with the lymphatic and blood making organs I have derived excellent results from the use of Gude's Pepto-Mangan.

Decided amelioration in the Leuchaemic state, arrest of the process in severe cases for a long time, reduction of the glandular swellings, improvement in the relation between red and white corpuscles, were noted by me in several cases under my care.

In my opinion, the value of ferruginous preparations in neurasthenia and hysteria has received too little consideration. The success of a rational therapy depends upon an effective application of all methods of treatment and remedies which enable us to combat the entire group of symptoms. An easily absorbable ferruginous preparation is of incontestable benefit, and I believe that Gude's Pepto-Mangan occupies a prominent place in this connection. It is not my intention here to institute comparisons with various iron preparations, but I would emphasize, for reasons already mentioned, and which are especially based upon the composition of Gude's Pepto-Mangan, that I prefer the latter preparation, and have employed it successfully in all conditions where it is necessary to improve the quality of the blood.

In conclusion, I would mention that I have obtained excellent results from Gude's Pepto-Mangan in two cases of severe malarial cachexia. In the one case the treatment occupied three weeks, in the other five weeks. Both cases were cured. It is of interest that in the first case in which a malarial attack had not occurred for some time, a typical paroxysm with rigor, fever and sweats developed. After one week's treatment the attack failed to recur, and for this reason I was unable to search for plasmodia. I am not disposed to overestimate this occurrence, nor to make it the subject of theoretical reflections. I am decidedly of the opinion, however, that this attack is attributable to an influence of Pepto-Mangan "Gude" upon the spleen.

In all particulars Gude's Pepto-Mangan is an excellent preparation, which bids fair to occupy a permanent place in the materia medica. I would be pleased if through this article I had directed attention to this valuable remedy, and incited others to undertake experiments and report their observations.

MYOCARDITIS, CHRONIC.

In chronic myocarditis the most common physical sign is the sallow, pallid countenance. A general endarteritis may be present for a long time and yet no change occur in the complexion. Interstitial nephritis may progress slowly, and yet cause no change in the complexion. The onset of this sallow hue is generally synchronous with the degenerative cardiac lesion, and usually cardiac symptoms or physical signs are found coincidentally, the endarteritis involving the coronary arteries.

With the sallow countenance, the earthy complexion, a prematurely old appearance of the individual manifests itself, in the color of the hair, the baggy eyelids, and the abundance of wrinkles,

With the external appearance common to most cases the results of physical examination usually tally. In the first place, there is evidence of endarteritis in the vessels.

The physical signs of the heart are those of the (a) myocarditis alone, or those of (b) myocarditis plus some hypertrophy, or those of (c) myocarditis plus dilatation. The physical signs of myocarditis are those of feeble or absent impulse; or, if palpable, of apex impulse displaced to the left; or marked increase in the area of absolute cardiac dullness, and of characteristic auscultatory phenomena.

The latter phenomena are those either of a systolic shock, greater than the force of the impulse would lead one to believe to be present, or of feeble muscular sound. From the first, or at least early, there is gallop-rhythm, or reduplication of the systolic sounds. This reduplication may be heard over the right heart or more distinctly over the left heart; sometimes it is heard all over the precordia. It may be more marked in the supine position, and is generally more marked after exertion. It may disappear after a stimulant is taken or if the heart is stimulated by fever.

Reduplication of the second sound also obtains, but is less frequent in the myocarditis of coronary artery disease than in that due to valvulitis or nephritis. In uncomplicated cases murmurs are not heard until late in the disease. Sometimes, however, a systolic murmur is heard at the fourth rib, greater in the recumbent posture. This murmur is soft, low in pitch, and often heard in the parasternal line. Again, it is at the tricuspid or even may be in the pulmonary area, when it is probably, although not necessarily, haemic.

When dilatation supervenes, the physical signs change in keeping with the physical condition of the heart.—J. H. Musser (*Medical News*, Jan. 11, 1902).

LARYNGITIS, ACUTE.

In acute laryngitis, without oedema, inhalations of steam containing camphor-menthol will often in the early stages aid considerably in aborting an attack, while, after the disease has existed for a day or so, the addition of benzoin will aid in allaying the cough and irritation. When oedema is present, hot inhalations are of little value, and frequently increase the extent of the swelling, while an iced spray of 1-2 to 1 per cent. camphor-menthol, alternating every half-hour, or even fifteen minutes in cases where the dyspnoea is severe, with a spray of the suprarenal gland, will produce a rapid change in the appearance of the laryngeal swelling and frequently relieve the dangerous symptoms.—L. S. Somers (*Merck's Archives*, December, 1901).

Editorial.

JNO. C. LeGRANDE, M. D.,.....Editor and Prop.

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The Medical Association.

The Medical Association of the State of Alabama will meet in this city next month. Every member of the Association, and every doctor in Alabama who can possibly do so, should attend this meeting and assist in making it one of the best sessions in the history of the Association.

Dr. Wilson, president of the Jefferson County Medical Society, has already appointed a committee of arrangements, consisting of Drs. Wyatt Heflin, George S. Stubbs and W. M. Jordan. The committee is now actively at work to have everything ready for the convenience and comfort of those who may come to Birmingham on this occasion.



Beside the regular program, that is, the reading and discussing of papers, and other business which may necessarily come up for consideration, there will be some little time given to the social features. A number of entertainments and receptions are being arranged, which, no doubt, will be enjoyed by all the doctors who attend.

The Journal insists on every doctor in Alabama coming to see us at this time. Come and forget for a time at least the worry and anxiety incident to the regular routine work of the doctor; in fact, lay aside business affairs, and give the few days set apart for the meeting to the doctors of Alabama. Enter into it heartily and enjoy it fully and completely. Come to take a cheerful, active, personal interest in everything that is done, and in everybody you may meet. Come to shake hands with your brother doctors and tell them of the good times and good things you have enjoyed during the past year. If you have a good joke to tell, and have the special requisites necessary to tell a good joke, and to make it take, don't fail to tell it. If, however, you make no pretensions on this line, then make up your mind to be a cheerful, interested and appreciative listener to the other fellow.

The Journal takes special pleasure in extending to the doctors of Alabama a most cordial welcome, with assurance that there never was a time in the history of the great city of Birmingham when the doctors were more anxious, more willing, and were looking forward with greater pleasure to entertain their brother practitioners. Come expecting to have a right royal good time.

Gonorrhœa as a Blood Infection.

We have always been taught that gonorrhœa was a local trouble which rarely extended beyond the urethral mucous membrane. We knew that occasionally the infection reached the bladder and caused a rather distressing cystitis, and that in rare cases it might extend up through the urethra and invade the kidney. It was not believed that the gonococcus ever made invasion beyond the genito-urinary mucous membrane.

Investigation during the past ten years has proven the above ideas false. The microscope has shown the gonococcus in the blood, the joints, tendon sheaths, the pericardium, the peritoneum and other parts of the body; so we can no longer say that gonorrhœa is strictly a local trouble.

Gonorrhœal anthritis has been recognized for years without any thought of the gonococcus being present in the joints, the idea being that the arthritis was caused in some indirect way, and that the treat-

ment must consist largely of treating the source of irritation in the urethra. In 1892 Lindeman obtained pure cultures of gonococci from gonorrhoeal arthritis, the gonococcus infection was found in tendon sheaths in 1893 by Tollemer; in the perichondrium by Ghon in 1894; of the pleura by Mazza, of the blood and endocardium by Thayer and Blumer in 1895; of the cervical glands by Pettit and Pichevin in 1896; of the parotid gland by Colombini in 1897, and of the pericardial exudate by Thayer and Lazear in 1898.

We have reports of fatal infection of the endocardium by a number of observers.—Young of Johns Hopkins observed a case of cystitis of five years' standing with a double pyonephrosis in which he obtained urine from suprapubic puncture and found a pure culture of gonococci from this urine.

This infection invades the bone. Ullman had a case in which both elbow joints became involved in the third week of gonorrhoea; one of the joints was opened and drained, and in a short time the lower end of the humerus had to be chiseled open and a quantity of pus was evacuated in which no germ was found except the gonococcus.

Ullman cites five cases of fatal septicaemia in which the cause was not discovered until post mortem showed a gonococcus infection of the prostate.

We know now that various disturbances of the nervous system may result from gonorrhoeal infection. Eulenburg has recognized the following conditions due to this cause: Neuralgia, especially lumbar and ischiatic; muscle atrophy and paralysis; neuritis and myositis; diseases of the spinal cord resembling tabes, attacking principally the motor sphere.

Paulson observed a case of gonorrhoeal infection of the eyes in a new born babe in which an inflammation of the knee joint appeared in ten days after birth.

We have had many patients who suffered of chronic gonorrhoea ask if they should not take something for their blood, and we are accustomed to tell them that their blood is all right. We now know that their blood may be teeming with gonococci, and at the same time we are unable to prescribe any specific which will destroy the germ. Neither the laity nor the profession have ever regarded gonorrhoea in its true light. They have thought of it as rather a trivial affection which by the use of some "old formula" would soon get well. No greater mistake could be made, as a chronic gonorrhoea is decidedly one of the most difficult diseases to eradicate with which we have to deal. When it is generally understood that many a chronic case becomes a constitutional trouble of much gravity, the profession will deal with it more zealously and the public in general will recognize the

importance of applying to a physician early for treatment, instead of "piddling" along with a formula of their friends or the druggist who has a "sure cure in three days."

FATE.

Two shall be born, the whole wide world apart,
 And speak in different tongues, and have no thought
 Each of the others being, and no heed;
 And these o'er unknown seas to unknown lands shall cross,
 Escaping wreck, defying death;
 And all unconsciously shape every act,
 And bend each wondering step to this one end:
 That one day, out of darkness they shall meet,
 And read life's meaning in each others eyes.

 And two shall walk some narrow way of life,
 So nearly side by side, that should one turn
 Ever so little, left or right,
 They needs must stand acknowledged, face to face.
 And yet with wistful eyes that never meet;
 With groping hands that never clasp, and lips
 Calling in vain to ears that never hear,
 They seek each other all their weary days,
 And die unsatisfied. And this is Fate.

—Susan Marr Spaulding, in *Texas Medical Journal*.

RECTAL VALVES.

For the last two and a half years the movable rectum has been personally examined in some two hundred different individuals, and, with the exception of those subjects in whom the gut-walls had been rendered non-inflatable by disease, not an instance has been found in which the presence of the rectal valves admitted of a question. These structures have not only been present, but always the most conspicuous and easily discernible features in the entire rectum.

The rectal valves are not composed of mucosa alone, but comprise in their structure submucosa and muscular fibers as well, and therefore must impose direct resistance and support to the rectal contents; hence must be regarded as something other and more than mere folds of mucous membrane. From the modification in structure and arrangement which all the coats present upon reaching these valves, one is forced to the conclusion that they are definite anatomical structures, and should be entitled to recognition as such, just as much so as the appendix vermiformis.—A. B. Cooke (*American Practitioner and News*, Dec. 15, 1901).

Miscellaneous Notes.

NEW ORLEANS POLYCLINIC

Now in session fifteenth year. Closes May 31, 1901. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information, address Dr. Isadore Dye, Secretary, New Orleans Polyclinic, Postoffice box 797, New Orleans, La.

We are delighted that so many of our old subscribers are renewing and paying to Jan. 1st, 1903.

Read all the new advertisements in this issue of the Journal. You may find something which will interest you.

In many vague and indefinite ailments due to latent rheumatic conditions, Tongaline will effect a cure promptly and thoroughly.

We call attention to the card of the National College of Law, Nashville, Tenn., in this issue of the Journal. For particulars write the president of the college, William Farr, for catalogues, etc.

"For functional uterine and ovarian disorders the medical profession will find in Ponca Compound that which is uniform, portable, convenient, reliable and agreeable, in fact a definite chemical compound."—I. N. Love, M. D., New York City, N. Y.

Dr. George H. Simmons, editor of the Journal of the American Medical Association, and Dr. Henry P. Newman, Treasurer of the American Medical Association, spent a day in Birmingham during the month. While here they were the guests of Drs. J. D. S. and W. E. B. Davis.

The St. Louis Medical Review is responsible for this paragraph: "A woman 65 years old gave birth recently to a healthy girl in a New Jersey town. The woman's husband is 70 years old, although both are said to be young looking for their years, and the couple had passed forty years in a childless wedlock."

A Philadelphia jury gave Mrs. Nugent \$1,000 damages in her suit against Dr. H. M. Righter for the death of her six-year-old boy, on the ground that he was infected with impetigo contagiosa by an uncleanly vaccination. The case will be appealed, and a physician who testified against Righter will be expelled from the County Medical Society.

It is ourselves that we are finding out all the while as we go about judging others. If we seem to find all men unjust, unreasonable, proud, vain, deceitful or false, there is enough in the discovery to startle us. It is the echoes of our own heart that we are hearing. It is the revelation of our own inner self that we are seeing reflected. We should seek instantly to find a new self, and then we shall find ourselves in a new world.—Ex.

A responsible French writer states that there are in Paris 2,600 physicians. Of these 40 earn from \$40,000 to \$60,000 a year, 50 earn \$20,000 a year, 50 from \$10,000 to \$20,000, 200 from \$6,000 to \$10,000, 200 from \$4,000 to \$6,000, whilst 1,700 earn on an average \$620. In the whole of France there are 16,000 practitioners, whose average professional earnings are less than \$600 a year, and this amount does not represent net but gross earnings.—Ex.

Dr. W. E. Fitch, founder, and for many years editor and business manager of the Georgia Journal of Medicine and Surgery, published at Savannah, Ga., has sold his interest in the publication to his former associate and co-editor, Dr. St. J. B. Graham, who becomes editor and sole proprietor. The Journal, under Dr. Fitch's editorial management, from the appearance of the first issue, merited the support of the profession, and gradually year after year, made for itself a place among the best medical periodicals of this country. The Doctor will devote his entire attention to the practice of his profession in Savannah, Ga.

The unforgiving cannot get God's forgiveness. It is put in the liturgy of penitence that we must forgive before we can even ask for forgiveness. "Forgive us our debts, for we have forgiven." If we will not show mercy, we cannot even ask to have mercy shown to us. Then with men, too, sternness finds sternness, resentment meets with resentment. He who sees no good in others must not be surprised and must not complain if others fail to see any good in him. The man who has only harsh words for his fellows cannot expect to hear words of love from others concerning himself.—Maryland Medical Journal.

Acute metritis resulting many times from exposure to cold during menstruation or from gonorrheal infection usually manifests itself by a chill, more or less severe, with pains in the lumbar or hypogastric region. The most satisfactory treatment for this condition is rest in bed with an ice coil or bag on the abdomen over the uterus followed by thorough flushing of the vagina with hot water in which has been dissolved Micajah's Medicated Uterine Wafers (one to the quart). After the acute stage has subsided a Micajah Wafer inserted into the vaginal canal up to the cervix will exert the antiseptic astringent action so essential in these cases.

Disturbance of nutrition is the cardinal point in the etiology of gout and rheumatism. In the transformation of products of dissimilation the liver plays a very important part, for it is here that nitrogenous bodies undergo the final change which reduces them to urea. In faulty reduction by the liver and consequent failure of the emunctories we have the basis of rational treatment of these diseases. In Tri-Iodides (Henry), an alkaloidal combination of phytolaccin solanin, colchicin and hydriodic acid, with C. P. sodium salicylate, we have an iodine alterative well borne by the stomach, without injurious by-effects, covering the entire range of the therapy of salicylates and iodides, and which fulfills all the indications suggested by our knowledge of the etiology of gout and rheumatism.—Medical Essays, Henry.

J. P. W. Smithwick, M. D., in an article entitled "Therapeutics of Convalescence from La Grippe," says in the Southern Medical Journal: "During the past year I have made use of Angier's Petroleum Emulsion with Hypophosphites among my patients which were convalescing from La Grippe. All of them improved rapidly with its use, who had done badly under the administration of Cod Liver Oil and various tonics. I have noted no case in which Angier's Petroleum Emulsion caused digestive or intestinal trouble, it being on the contrary well borne by weak and irritable stomachs."

Dr. Smithwick gives clinical histories of a number of cases in all of which the relief of the cough was prompt, digestion and assimilation resumed normal conditions with a consequent improvement in the appetite, there was an invariable gain in weight and the patient's convalescence was prompt and satisfactory in every instance.

Dr. Cunningham Wilson, President of the Jefferson County Medical Society, has sent a circular letter to each member of the Society containing the following suggestion:

My Dear Doctor. While the usual way of reporting cases to the

County Medical Society has been very satisfactory, and I have no desire to put an end to such reports. I think they would be better received and elicit better discussions if it were generally known what cases would be reported at a given meeting.

"Written reports with more careful histories of cases would add tone to the Society and would be in keeping with the best medical societies. It would also give increased interest, when possible, to show the patients with the report of cases.

"If you will let me know when you have a case to report, and care to adopt the above course, I will take great pleasure in having our Secretary announce the subject on the regular cards."

GYNECOLOGICAL ANTISEPTICS.

By J. S. Tyree, Chemist, Washington, D. C.

"Women are changeable." Thus sang the Duke in *Rigoletto*; but is the sex more changeable than the practice of her medical advisers?

A few years ago the Curette held universal and almost undisputed sway. This instrument of torture still has a limited number of misguided followers, but its use is now being roundly condemned by very many practitioners as savage, cruel, and productive of untold harm in thousands of cases. There is no doubt but its sway for a decade left an army of chronically if not irreparably injured cavities and canals.

A better, more humane and rational way of treating a majority of gynecologic cases has been found. Antiseptics have solved the problem, and it is to be hoped the cruel Curette has been given a permanent vacation. It has been demonstrated that septic conditions are more surely and safely corrected by topical applications than by the scraper. The use of the latter, except in the removal of adventitious tissue and—there are much better ways than by the use of this instrument—is no more rational than it would be to attack an eczematous surface with a sharp steel ink eraser and vigorously denude it of skin.

The hey-day and eclat of the fresh-fledged hospital interne, with his array of scalpels, curettes, vulsellums, catgut and antiseptic gauze, has happily reached its zenith and is on the decline. The ubiquitous gynecologist, with his mania for immediate operation, is being invited to take a vacation—in some instances to "go away back and sit down."

The late Prof. Skene, than whom no gynecologic specialist stands higher in the estimation of his colleagues in this country or Europe, was, before his lamented death, vigorous in his denunciation of the prevailing tendency to operate in all cases of degenerative disturbances of the female generative system. His matured conviction was that local and constitutional measures should in all cases first be intelli-

gently pursued, leaving operative interference for the few rare cases in which it is imperatively demanded.

The reaction has set in. This is the age and era of antiseptics in medicine. They are the sheet anchor of every rational practice regardless of its name or school. Without them both physician and surgeon would be practically helpless. Their consumption probably exceeds that of any other class of medicines. There is scarcely a disease in the pathologist's nomenclature for which antiseptics are not prescribed. The list is fairly interminable and indicates how woefully lame the modern practitioner would be without his ever ready and efficient antiseptics. Practically, as with the disconsolate Othello, if deprived of them, his occupation would indeed be gone.

The demand for an antiseptic combining strength with safety, efficiency with absence of evil after-effects, for gynecological uses, resulted in Tyree's Antiseptic Powder. These positive and negative properties are thoroughly represented in this powder. Sensitive mucous membranes have to be invaded, and while they need thorough relief from the attacks of virulent germs, their delicate surfaces and structural integrity must be preserved and maintained at all hazards.

Tyree's Antiseptic Powder is destructive to germ life and cleansing to mucous membranes. It is not only harmless, but is a tonic to healthy tissue.

THE COCAINE HABIT.

The cocaine habit is at present attracting considerable attention from a medico-legal standpoint, and while it is a comparatively recent addition to the somewhat lengthy list of "drunk" producers, the easy and insidious manner of its acquirement and development render this form of dissipation difficult of detection. A little investigation into the manner in which this vicious habit is contracted and the pernicious influence it exerts upon its victims and their immediate surroundings will prove edifying to the scientist and surprising to the casual observer.

He who is conversant with the classic "Confessions of an English Opium Eater," or has at some time in life experienced the magic spell of the juice of the poppy—yea, even the charming excitement following physiological doses of the dewy distillations of the golden cereals—will more easily comprehend the alluring snares of their more powerful ally, cocaine; more powerful in its immediate influence, more lasting in its remote effects, more potent as a mind-destroyer and crime-breeder than either of the foregoing, it renders its victim a hopeless wreck and leaves but a vestige of that self-respect which once was his in the full fruition of manliness.

A man filled with "tangle-foot" is content with its mollifying influence; however, he is not infrequently seized by an insatiable desire to impart a few drops from his over-filled cup of joy to that division of humanity which never goes beyond buttermilk or seltzer, and thus he sometimes makes the nights of the virtuously inclined hideous by his jocund homeward passage in the "wee small hours." The physiological phantasmagoria of the red glow of the poppy seek the luxurious couch of studied elegance and find solace in the profound sleep of the overfed.

Of the above one may well say, "he who runs may also read," but how shall we detect the votaries who worship at the shrine of Erythroxyton? They pass to and fro hourly in the very midst of the busy haunts of life, like a subtle perfume, causing here and there a smile or shrug of the shoulders, but rarely indeed attracting sufficient attention for detection; forsooth, ye merrie "coak" is long on deception and concealment. It is only when the habitue takes more than his usual allowance that he lays himself liable to detection by his extreme affability or disagreeable moroseness, the rapidity with which statements are made and contradicted, the ease with which his most fixed belief concerning ethics, politics or religion may be controverted, together with the purposeless muscular movements and disconnected ideas, all of which, for want of a better name, we will designate as chorea of thought.

The writer has observed no tendency to criminality in the cocaine user so long as he confines himself to this particular form of debauchery. Give whiskey or opium to the case, and we have an irresponsible individual, all the passions unbridled, hope and fear in abeyance, running riotously in our midst without sail or rudder, menacing alike the peace and dignity of the State and the welfare of society.

Since the time when the memory of man runneth not to the contrary, the human species in all climes and conditions has been assiduously engaged in the discovery and consumption of nerve-lulling drugs. The success attendant upon their efforts is fairly familiar to most practitioners of medicine, but the dementia and dwarfing influence on posterity are beyond the comprehension of the human understanding.

The ease with which the cocaine may be obtained is not in keeping with the eternal fitness of things, and scientific bodies are casting about for legislation restricting its sale. The novice timidly approaches the druggist and whispers his desire, but the old-timer advances toward the counter with the eagerness and assurance of a child bent toward buying candy, holds up one or two fingers to indicate the amount desired, throws down a nickel or dime, and leaves with the

alacrity of a small boy receding from the business end of a wasp, to seek some retired spot and the solace and forgetfulness which the precious purchase will bring.

In enacting statutes for the regulation of the sale of this drug we must move slowly and with that deliberation which will insure the greatest good to the greatest possible number. For instance, it has been suggested that the sales be limited to physicians' prescription and be subjected to the statutory provisions regulating the sale of poisons in general.

Now, we will only suppose a case of one of the eighty-five graduates in each one hundred who fail to gain a livelihood in the practice of medicine should turn legally, mind you, to writing prescriptions for these poor, misguided, nerve-wrecked cocaine-thirsting beings. On the other hand we will take the case of a physician owning and operating a drug store; honestly, do you not think this would be the source of a tempting income and thwart the very object of such legislation by rather increasing than diminishing the sale and consumption of this drug?—W. D. H., in the Cincinnati Lancet-Clinic.

OSTEITIS OF THE KNEE, EFFECT OF.

From measurements of the femorae, tibiae, feet, and patellae, during or after osteitis of the knee, in 40 cases where the disease had begun in childhood, the following conclusions were reached: 1. The affected limb, if approximately straight, was longer in the first four years in the large majority of cases. In observed cases of adolescents and adults it was from one to several inches shorter when the disease had lasted over seven years. 2. The affected femur was nearly always longer in the first four years, and the lengthening of the limb mainly due to lengthening of the femur. In the older cases, after a duration of seven years or more, the femur was markedly shortened. 3. The tibiae were usually equal in length in the early stages; later the tibia of the affected side might be slightly longer for a time, but oftener shorter; the shortening increased considerably in the older cases, and after the subsidence of inflammation. 4. With limbs of equal length and a duration of several years, the femur of the affected side was found longer and the tibia shorter than its mate. 5. The foot and patella showed a difference in favor of the sound side after one year and frequently before. 6. The stimulation of growth in the affected femur was accompanied by a retardation in the tibia, foot, and other parts; growth in the femur itself was finally retarded. The result after many years was often considerable shortening of the limb.—H. L. Taylor (Medical News, Dec. 28, 1901).

WHAT THE AMERICAN MEDICAL ASSOCIATION ASKS OF
THE STATE SOCIETIES.

[I reproduce the following, from the Journal of the American Medical Association, that members of the Texas State Medical Association may know, and when we meet in Dallas, May 6th, be prepared to vote intelligently on the changes that are contemplated to be made in the constitution of the State Medical Association; also, that members of local societies may be informed of the new relations that will be brought about if the changes above mentioned are effected. It is most desirable that there should be a full attendance. It is also highly important that those who are not members of any society should catch on, quick, because things are shaping now, so that to be not a member of one's local society puts one horsdu concours; that is, not in the swim, the push, not even a little bit. A badge of membership will be the sine qua non of respectability, in fact.—Ed.]

The following resolutions, among others, recommended by the committee on reorganization were adopted at the last meeting of the American Medical Association:

c. That the State societies unitedly agree to federate themselves in the American Medical Association, and, as a preliminary to this, adopt a uniform organic law in regard to certain fundamental principles, viz.: to divide their annual sessions into two branches, legislative and scientific; the legislative branch to be as small as is compatible with representation from all the county societies, and to be composed of delegates elected by the county societies.

d. That membership in the county or district societies shall constitute membership in the respective State society without further dues, and that no one be admitted to membership in the State society except through county or regular district societies.

e. That funds to meet the expenses of the State society be raised by a per capita assessment on the county and district societies.

f. That a united effort be made to influence special societies to limit their membership to those who support the regular organization, and the semi-national and miscellaneous societies to encourage systematic organization, by covering a definite territory and also by limiting their membership to supporters of the regular organization.

g. That each State society create a permanent committee and a fund for the purpose of enforcing all medical laws in every part of its territory.

h. That each State society co-operate with the American Medical Association and with the other State societies in solving the problems now before the profession relating to medical education, medical legislation, reciprocity, licensing, etc.

An analysis of these resolutions shows that the American Medical Association requests the following:

1. The federation of all the State associations in the American Medical Association.
2. That all associations adopt a uniform plan of organization as regards certain fundamental principles.
3. That each State association have two distinct branches, legislative and scientific.
4. That the legislative branch be as small as compatible with representation from all county societies in the States or territory, and to be composed of delegates by the county (or district) societies.
5. That the scientific branch be composed of and open to all members of county (or district) societies, or as stated in the resolution: "Membership in the county or district society shall constitute membership in the respective State societies without further dues, and that no one be admitted to membership in the State society except through county or regular district societies."—Journal American Medical Association.

SCIATIC PAIN—PROMPT RELIEF.

In reporting his experience in the treatment of sciatica, Fred E. Davis, M. D., of Brookside, Ala., writes as follows in *Annals of Gynecology*: "I have been giving antikamnia and heroin tablets a thorough trial in the treatment of sciatica and I must say that my success has been phenomenal indeed. I have also induced two other physicians to give them a trial and their success equals or surpasses my own. I meet with many cases of sciatica and until antikamnia and heroin tablets were introduced I was compelled to use a great deal of opium and morphine to relieve the pain. Since then, though, I have not given either. One of my patients had been confined to bed for three weeks during her last attack of sciatica. I prescribed one antikamnia and heroin tablet every four hours and in forty-eight hours she was up and about and has not felt the pain since. I thank you for the introduction of this most excellent remedy and assure you of my willingness to report the results of still further investigation."

LAC-BISMO.

The tried specific for morbid conditions of the mucous membranes, is manufactured by E. J. Hart & Co. Ltd., of New Orleans, La. A postal will secure a liberal sample and valuable literature on the subject. All pharmaceuticals offered by this old and reliable firm are sure to be welcomed by the profession, because of the well known general excellence of their preparations.

WHOOPIING-COUGH.

Of drugs for internal medication, the antispasmodics are the best. *Mistura asafœtida*, 1-2 drachm every two hours, is of value. This, however, is often disappointing, and probably the next best drug is belladonna. The dose of the tincture should be 1 drop for every month of the child's life, and should be pushed to the full physiological effect. A prescription personally used is the following:

R Atropinae sulphatis, 1 grain.
Aquae destillatae, 1 ounce.

One drop of this is given every three to four hours, and gradually increased until a cutaneous flush is obtained, and the child is then kept under its physiological effect. Of the coal-tar products, antipyrin is the best. One grain of antipyrin is given for each year of the child's life.

A combination of belladonna or atropine and antipyrin acts better than any alone. A very useful adjuvant is the use of a freshly-prepared belladonna plaster placed between the scapulae.

Convalescence is favored by sea-shore life, and a tendency to chronic bronchitis is overcome by an early and continued use of cod liver oil.—W. C. Hollopeter (Medical Bulletin, December, 1901).

PSYCHOSES, THE ACUTE.

Under certain conditions and in carefully selected cases travel is a therapeutic measure of great importance. To advise it indiscriminately is more than a mistake; it is a crime. Whether it be by sea or by land, the special nature of each case must determine. Travel has two spheres of greatest usefulness: either as a preventive measure or as an aid to convalescence.

Slight dementia, due to serious bodily illness, and the insanities associated with phthisis, asthma, etc., have been greatly benefited by sea-voyages. Paranoia is harmed, never helped; travel increases the morbid egotism and intensifies the delusions. In excited mental cases, especially in general paralysis, travel is counter-indicated. Much has been hoped for it in adolescent insanity, but the results have been most disappointing. An ocean-voyage is thought to be especially desirable for the milder melancholias: those arising from shock, influenza, and overwork. The graver forms of the disease are only intensified by it. The quieter melancholias are kept, the better. Travel greatly increases the probability of suicide in this class of cases.—C. Eu-

gent Riggs (Journal of the American Medical Association, Nov. 23, 1901).

CONVULSIVE TIC.

Very many of these cases are habit cases, induced by some trivial local source of irritation or reflex influence not of central origin. In such, static electricity plays a double role, and is uniformly successful if applied early. (1) It lessens the irritability, and (2) acts as a powerful suggestive influence when systematically employed.

Most cases of central origin are not due to any traceable organic defect, but are induced by functional derangement. Such are capable of being cured if not too long standing. For treatment, a metal electrode covering the affected muscles is applied and held in position with the hand, and the wave-current is employed with as long a spark-gap as can be used without causing painful muscular contractions. Sparks to the region will also render the results more effective in some cases. If the condition is suspected to be of central origin, a large electrode to the back or abdomen should be used, as in epilepsy, for an additional fifteen minutes for its general effect. Under this regime there are few cases of not more than two years' standing that will not yield.—W. B. Snow (Journal of Electrotherapeutics, December, 1901).

THE OSTEOPATHS GET IT IN THE SOLAR PLEXUS IN NEW YORK AND KENTUCKY.

The osteopaths made a desperate effort to secure the passage of a bill through the Kentucky Legislature to grant them all of the rights and privileges that the regular physicians are entitled to except to practice major surgery. They employed the best legal talent in the State to plead their cause before the committee to whom the bill had been referred. Suffice it to say that the committee very promptly put it to sleep, and it is to be hoped that it will sleep the sleep that knows no waking, and that all bills of a similar nature will meet the same fate if such should be presented to any legislative body for consideration.

The passage of such a bill as was presented to the Kentucky Legislature in any State would make it a haven for quacks, as it would enable the osteopaths to register anybody who would pay their examining board enough money. In short, it would be a get-rich machine the like of which has not been heard of in modern times.

The New York Legislature was asked to pass a bill with absurdities in it similar to those in the Kentucky bill, but the committee recog-

nized the "ass's ears" in time to send him to grass for an indefinite period.—The American Practitioner and News.

CONVICTED OF ABORTION.

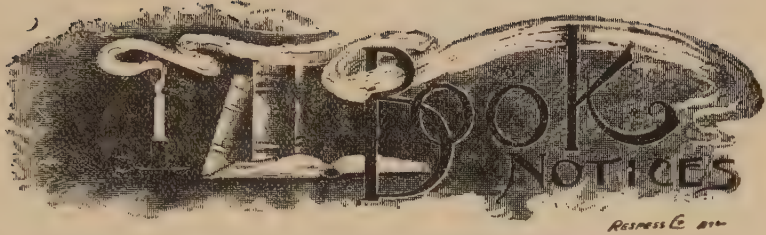
Dr. Q. C. Smith, of Austin, a well known practitioner of more than twenty years in this city, was indicted by the grand jury for criminal abortion, and was tried at the present session of the Austin district court. The verdict of the jury was "guilty," and the punishment was assessed at two years in the penitentiary. A motion for a new trial was granted, on the ground that at the noon recess one of the jurors had separated himself from the others, and had gone down town to dinner instead of dining with the sheriff. Dr. T. J. Bennett, of Austin, who was called to the woman after Smith had delivered the fetus, was the complainant and prosecuting witness.—Texas Medical Journal.

A GREETING TO THE NEW GRADUATE.

When Dr. Clark, professor of medicine in the College of Physicians and Surgeons, was in his prime, a member of the graduating class called on him for the purpose of having his chest examined. Having undergone the examination and received assurance that his lungs were sound, the young man asked the Doctor what his fee was. "Oh, nothing, sir; nothing at all." "Why, how is that?" "Well, you know, dog doesn't eat dog." "What do you mean, sir?" "Simply that one doctor doesn't charge another doctor for professional services." "But, you know, Professor, I'm not a doctor; I'm only a student." "Very well, dog doesn't eat pup."—N. Y. Med. Journal.

SMALL POX THERAPY.

The prevalence of a mild type of small pox throughout the country gives the therapy of that disease especial interest at the present time. Vaccination is, of course, unquestionably not to be overlooked as a preventive measure, but in addition infection may be made much more unlikely and, where infection has taken place, the course of the disease considerably shortened and shorn of its terrors by the administration of the valuable anti-purulent ecthol. The Battle Company has just issued a pamphlet dealing with the use of ecthol in this disease. The pamphlet should be in the hands of every physician who may be called upon to treat small pox. It will be sent to any physician who makes the request.—Medical Fortnightly.



PEDIATRICS—THE HYGIENIC AND MEDICAL TREATMENT OF CHILDREN. By Thomas Morgan Rotch, M.D., Professor in the Text and by Colored Plates. J. B. Lippincott & Co., Pub. As a reliable and systematic treatise on the disease of children Rearranged and Rewritten. Illustrated by Numerous Engravings in the Text and by Colored Plates. J. B. Lippincott & Co., Publishers, Philadelphia, Pa.

As a reliable and systematic treatise on the disease of children there is not a superior work in the hands of the medical profession. Every subject relating to the disease of children is clearly and concisely discussed. The author says for the book:

When another edition of this work was called for it was found necessary to rewrite it in order to bring it into accord with the advances which have been made in the subject of Pediatrics during the past six years. It is, therefore, offered to the professor as practically a new book. The order in which the different subjects have been treated, and the relative space assigned to them, have in many instances been radically changed. The endeavor has been made to emphasize the practical character of the work by thoroughly systematizing the etiology, the symptomatology, the diagnosis, and the treatment of various diseases. Much attention has been devoted to the anatomy and physiology of early life and to the advances which have been made in the subjects of infant feeding, of bacteriology, and of the blood. Several new colored plates and a number of radiographs have been added to the illustrations.

In acknowledging the aid which I have received I owe special recognition to my assistant and friend, Dr. Maynard Ladd, for his help in the preparation of the entire book. His interest and enthusiasm have been unflagging and invaluable. My thanks are also offered to those who have by their advice enabled me to remodel the book, and I would particularly acknowledge the information connected with the pathology which has been given so freely by Professor William T. Councilman.

I am under much obligation to Dr. John H. McCollum, Dr. Robert W. Lovett, Dr. John L. Morse, Dr. Algernon Coolidge, Jr., Dr. John Dane and Dr. John T. Bowen. Dr. William P. Northrup supplied for the previous edition a number of valuable plates illustrating gastro-entric diseases, and these plates are now retained. Dr. Franklin W. White has been of great service in the preparation of the article on the blood. Dr. Ernest A. Codman kindly furnished the plates of the radiographs. The publishers have shown unfailing courtesy and much liberality.

SAUNDERS' MEDICAL HAND-ATLASES.

ATLAS AND EPITOME OF SPECIAL PATHOLOGIC HISTOLOGY. By Docent Dr. Hermann Durek, of the Pathologic Institute of Munich. Edited by Ludvig Hektoen, M. D., Professor of Pathology in Rush Medical College, Chicago. Vol II.—Liver; Urinary Organs; Sexual Organs; Nervous System; Skin; Muscles; Bones. With 123 colored illustrations on 60 lithographic plates and 192 pages of text. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.00 net.

This volume continues the subject of Pathologic Histology in the Saunders Series of Hand-Atlases, and is, if anything, even handsomer than its companion volume issued some months ago. As in all the volumes of this well known series of books, the illustrations are the special feature. The subject of pathologic history is particularly adaptable to illustrative treatment. Indeed, in no other way can the subject be adequately presented in a text-book. The colored lithographs of this volume are beautifully reproduced, and are extremely accurate representations of the microscopic changes produced by disease. The great value of these plates is that they represent in the exact colors the effect of the stains which are of such great importance for the differentiation of tissue.

The text portion of the book is admirable, and, while brief, it is entirely satisfactory in that the leading facts are stated, and so stated that the reader feels he has grasped the subject extensively. The work is modern and scientific, and altogether forms a concise and systematic view of pathological knowledge.

SAUNDERS' MEDICAL HAND-ATLASES.

ATLAS AND EPITOME OF BACTERIOLOGY. A text-book of Special Bacteriologic Diagnosis. By Professor Dr. K. B. Lehmann, Director of the Hygienic Institute in Wurzburg; and R. O. Neumann, Dr. Phil and Med., Assistant in the Hygienic Institute in Wurzburg. From the Second Enlarged and Revised Ger-

man Edition. Edited by George H. Weaver, M. D., Assistant Professor of Pathology, Rush Medical College, Chicago. In two volumes. Part I, consisting of 632 colored figures on 69 lithographic plates. Part II, consisting of 511 pages of text, illustrated. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$5.00 net.

This work supplies a long-needed want in the field of bacteriology and bacteriologic diagnosis, and proves a most valuable addition to Saunders' Series of Hand-Atlases. As in all the volumes of this commendable series, the lithographic plates are accurate representations of the conditions as actually seen, and this well-selected collection, if anything, is more handsome and useful than any of its predecessors. As an aid in original investigation the value of the work is inestimable.

The text is divided into a general and a special part. The former furnishes a survey of the properties of bacteria, together with the causes of disease, disposition, and immunity, reference being constantly made to an appendix of bacteriologic technic. The special part gives, so far as possible in a natural botanical arrangement, a complete description of the important varieties, the less important ones being mentioned when worthy of notice. The causes of diphtheria and tuberculosis, together with the related varieties, have been given especial attention.

Most praiseworthy is the reformatory tendency in regard to the grouping of varieties of bacteria, the strict division of the system especially, the rational naming of the bacteria, etc. The system of nomenclature is entirely original with the authors and is deserving of the greatest commendation, particularly that of the fission-fungi, which has been handled in a most masterly manner.

As a text-book of bacteriology and bacteriologic diagnosis it is all that could be desired, embracing, as it does, in a comparatively limited space, all the important special and many of the less valuable ones, and discussing them in language concise and easily intelligible.

WARWICK AND TUNSTALL'S FIRST AID TO THE INJURED AND SICK.

FIRST AID TO THE INJURED AND SICK. By F. J. Warwick, B.A., M.B., Cantab., Associate of King's College, London: Surgeon-Captain, Volunteer Medical Staff Corps, London Companies, etc.; and A. C. Tunstall, M. D., F. R. C. S. Ed., Surgeon-Captain Commanding the East London Volunteer Brigade Bearer Company; Surgeon to the French Hospital and to the Children's Home Hospital; etc. 16mo volume of 232 pages and nearly 200

illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$1.00 net.

This volume of practical information is intended as an aid in rendering immediate temporary assistance to a person suffering from an accident or sudden illness until the arrival of a physician.

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THE FOUR EPOCHS OF WOMAN'S LIFE.

THE FOUR EPOCHS OF WOMAN'S LIFE. A Study in Hygiene.

By Anna M. Galbraith, M. D., Author of "Hygiene and Physical Culture for Women;" Fellow of the New York Academy of Medicine, etc. With an Introductory Note by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania. 12mo volume of 200 pages. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$1.25 net.

Women have at last awakened to a sense of the penalties they have paid for their ignorance of those laws of nature which govern their physical being, and to feel keenly the necessity for instruction in the fundamental principles which underlie the epochs of their lives.

This is pre-eminently the day of preventive medicine. The physician who can prevent the origin of disease is a greater benefactor than he who can lessen the mortality or suffering after the disease has occurred. Any contribution, therefore, to the physical, and hence the mental, perfection of woman should be welcomed alike by her own sex, by the thoughtful citizen, by the political economist, and by the hygienist.

In this instructive work are stated, in a modest, pleasing, and conclusive manner, those truths of which every woman should have a thorough knowledge. Written as it is for the laity the subject is discussed in clear, comprehensible language, readily grasped even by those most unfamiliar with medical subjects. A valuable and commendable feature of this handy volume of instructive information is a comprehensive glossary of those medical terms necessary to a thorough un-

derstanding of the subject under discussion. Without doubt, it is a book that should receive the thoughtful consideration of every woman.

SAUNDERS' QUESTION COMPENDS.

ESSENTIALS OF PHYSIOLOGY. Prepared especially for Students of Medicine; and arranged with questions following each chapter. By Sidney P. Budgett, M. D., Professor of Physiology, Medical Department of Washington University, St. Louis. 16mo volume of 233 pages, finely illustrated with many full-page half-tones. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$1.00 net.

This is an entirely new work and a worthy accession to Saunders' excellent series of Question-Compendes. It aims to furnish material with which students may lay a broad foundation for later amplification, and to serve as an aid to an intelligent consultation of the more elaborate text-book. The subject of Physiology is covered completely, and, the author of the work being a teacher of wide experience, the salient points are particularly emphasized. An important feature is the series of well-selected questions following each chapter, summarizing what has previously been read, and at the same time serving to fix the essential facts in the mind. Nearly all the illustrations are full-page half-tones, and have been selected with especial thought of the student's need. In every way the work is all that could be desired as a student's aid.

AN AMERICAN TEXT-BOOK OF PATHOLOGY.

AN AMERICAN TEXT-BOOK OF PATHOLOGY. Edited by Ludwig Kektoen, M. D., Professor of Pathology, Rush Medical College, Chicago; and David Riesman, M. D., Professor of Clinical Medicine, Philadelphia Polyclinic. Handsome imperial octavo of 1,245 pages, 443 illustrations, 66 of them in colors. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$7.50; Sheep or Half Morocco, \$8.50 net.

The importance of the part taken by the science of pathology in the recent wonderful advances in practical medicine is now generally recognized. It is universally conceded that he who would be a good diagnostician and therapist must understand disease—must know pathology. The present work is the most representative treatise on the subject that has appeared in English. It furnishes practitioners and students with a comprehensive text-book on the essential principles and facts in General Pathology and Pathologic Anatomy, with especial emphasis on the relations of the latter to practical medicine. Each section is treated by a specialist who is thoroughly familiar with his

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